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Indo-European Ecologies

Cattle and Milk – Snakes and Water

Jenny H. Larsson, Thomas Olander, Anders Richardt Jørgensen (eds.)

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Contents

List of illustrations ix
Acknowledgements xi

1. Introducing Indo-European ecologies 1
   Jenny H. Larsson
2. Strangers from the waters – serpents, canids, horses and others: Indo-European conceptions of human ecology and the CENTRE–PERIPHERY spatial schema 7
   Riccardo Ginevra
3. Cattle, cosmology and sacrifice: An Indo-European interpretation of burnt mounds 49
   Anders Kaliff
4. Monsters and cattle: A topos and its mutations in Indo-European mythology 77
   Peter Jackson Rova
5. Churning the ocean of milk – a historical-comparative study of the Indo-European root **menth*$_{1/2}$- 101
   Birgit Anette Olsen
6. Farming, fertility and foaming water: Indo-European ritualizations of life-giving growth forces in Scandinavian agriculture 133
   Terje Oestigaard
7. A tiny Indo-European 'cow-suckler'? A new etymology for Breton *buzhugenn*, Middle Cornish *vethygan* and Gascon *bousic*, *boudic* 'earthworm' 163
   Anders Richardt Jørgensen
8. The Baltic house snakes in an Indo-European context 191
   Jenny H. Larsson

9. Afterword: The milk-drinking and milk-suckling snake revisited 213
Davide Ermacora

Biographies 243

List of illustrations

Chapter 2. Strangers from the waters – serpents, canids, horses and others: Indo-European conceptions of human ecology and the CENTRE–PERIPHERY spatial schema

1. IE conceptions of HUMAN LIFE and the CENTRE–PERIPHERY spatial schema. Graphics: Riccardo Ginevra © License: CC BY-NC 40

2. IE conceptions of human ecology and CENTRE–PERIPHERY spatial schema. Graphics: Riccardo Ginevra © License: CC BY-NC 43

Chapter 4. Monsters and cattle: a topos and its mutations in Indo-European mythology

1. Heracles and Geryon. Depiction on a Chalcidian amphora produced in Calabria (c. 530 BCE), Cabinet des Médailles, Paris (De Ridder.202) with painted inscription: ATHENAIE, GARUWONES, HERAKLES. Photo: Serge Oboukhoff / BnF-CNRS-MSH Mondes © License: CC BY-NC 82

2. Depiction on the golden bowl of Hasanlu (detail), north-west Iran (late 2nd millennium BCE). Image 96557, courtesy of the Penn Museum © License: CC BY-NC 83

3. Snakes and tricephalic monster with an axe and a tethered horned animal. Eighteenth-century rendering of a depiction of the fifth-century CE lesser horn (B) from Gallehus. Photo: Malene Thyssen. From: Wikimedia Commons. License: CC-PD 96

Chapter 5. Churning the ocean of milk – a historical-comparative study of the Indo-European root **menth$_{1/2}$-*

1. The Churning of the Ocean. From: Wikimedia Commons. License: CC-PD 103

2. Churning butter. From: WebExhibits © License: CC BY-NC 107

Chapter 6. Farming, fertility and foaming water: Indo-European ritualizations of life-giving growth forces in Scandinavian agriculture

1. Fertile fields covered by snow. Håga Valley in Uppsala, Sweden, 6 January 2022. Photo: Terje Oestigaard © License: CC BY-NC 135

2. Frey and wild-boar. By Jacques Reich (1852–1923). From: Guerber 1909: 118. License: CC-PD 141

3. The sacrifice of Domalde in Old Uppsala. By Erik Werenskiold (1855–1938). From: Snorri 2011 [1899]. License: CC-PD 142

4. Terrestrial and celestial forces at work in agrarian cosmologies. Graphics: Terje Oestigaard © License: CC BY-NC 145

5. Growth forces living and manifesting themselves beneath the snow in early spring. Photo: Terje Oestigaard © License: CC BY-NC 146

6. The never-freezing Ingbokällarna, Sweden. Photo: Terje Oestigaard © License: CC BY-NC 147

7. The Håga mound covered in snow, 6 January 2022. Photo: Terje Oestigaard © License: CC BY-NC 151

8. Fertile fields in the Håga Valley, Uppsala. Photo: Terje Oestigaard © License: CC BY-NC 154

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1. Introducing Indo-European ecologies

Jenny H. Larsson
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Abstract

This introductory chapter presents an exploration of the concept of ecology in Indo-European studies, emphasizing its dual nature in encompassing both culture and nature. It highlights the pivotal role of cattle in Proto-Indo-European societies, exploring their influence on the economy, social structures and religious beliefs. The chapter furthermore discusses the integration of cattle in guest–host relations and the mythologization of cultural others, as well as the perceived threats to cattle and their symbolic significance.

1. Indo-European ecologies

The concept of ecology was first introduced by the German zoologist Ernst Haeckel in 1866. The term itself is derived from the Greek words οἶκος (meaning 'household' or 'home') and λόγος ('word', but also 'knowledge about'), emphasizing the importance of the farm and the household as the foundation of ecology.

As alluded to by the title of this book, *Indo-European Ecologies*, the main focus is upon the early Indo-European beliefs surrounding the most important elements of the household (Greek οἶκος), above all cattle and milk, as well as a number of threats to this household, such as serpents, lizards and dangerous strangers. The relationship to cattle is abundantly expressed in words, myths and rituals occurring in different early Indo-European contexts. Many of these expressions may be assumed to have their origin in the pastoral, cattle-herding lifestyle facilitated by the ecological conditions on the Eurasian steppe.

Archaeological evidence, environmental data and a proper understanding of the ecological conditions on the Eurasian steppe may provide an explanation as to why notions of cattle, milk and chthonic

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creatures have gained such a significant and long-lasting position in many Indo-European cultural traditions.

2. Methodological considerations

In an interdisciplinary volume such as this, it is inevitable that labels and concepts may be used in slightly different ways. This may cause some confusion to the reader and it is therefore necessary to discuss this issue briefly.

While the linguist's definition of *Indo-European* is relatively straightforward, designating elements of a language directly descending from the shared proto-language, the archaeological and cultural situation is somewhat different. Here the Indo-European label may be applied to customs or beliefs ultimately continuing an unbroken tradition dating back to the time of the proto-language. However, the methodology is necessarily different. While linguistics can rely on the comparative method and the – admittedly idealized – concept of exceptionless sound change to minimize the likelihood of coincidental parallels or borrowed elements, the identification of cultural traditions is inherently more complex. Cultural practices may not always be accompanied by direct linguistic evidence, making it challenging to clearly establish their historical continuity. Nevertheless, there are ways around this problem. Even without direct linguistic evidence, it may still be possible to demonstrate historical continuity of the material. By showing a clear transmission lineage supported by both textual and archaeological evidence, one can aspire to affirm the historical depths of such cultural practices.

3. The importance of cattle for the early Indo-Europeans

Cattle were central to the early Indo-Europeans, playing a critical role not only in the societal structure and for sustenance but also in shaping the cultural practices and social identity. The rich vocabulary related to cattle, milking and dairy products reflects the material reality and practices of the early Indo-Europeans by highlighting the significance of animal husbandry and dairy farming on their way of life.

Cattle also held profound religious importance for the early Indo-Europeans. Cattle sacrifice was central to their religious beliefs and rituals, underscoring the close connection between daily life and cosmological beliefs.

The Indo-European tradition integrated a pastoral worldview and practices into an agricultural cosmology, as further elaborated in the

chapter by Anders Kaliff. In particular, Kaliff examines archaeologically documented burnt mounds in this context. He points to possible connections between the construction of the mounds and the accompanying material remains on the one hand, and early Indo-European sacrificial rituals and creation myths on the other.

In his chapter, Terje Oestigaard explores how domesticated grazing animals, most notably cattle, played a pivotal role in the pastoral economy. He focuses on the neglected theme of seasonal changes and how surviving the winter must have constituted a fundamental challenge for the early Indo-European societies in the cold north. He furthermore discusses winter rituals and sacrifices related to water and weather conditions.

This fusion of ecological considerations and cosmological beliefs created a particular Indo-European tradition, which emphasized the importance of the household, the environment, and human–animal relationships.

4. Cattle as currency in guest–host relations and the mythologization of cultural others

Cattle held an important role in the social and economic systems of the early Indo-Europeans, functioning as a form of currency in guest–host relations and serving as a symbol of power and prestige. This dual economic system, rooted in the ecology of society, had profound cultural and mythological implications, as explored in the chapter by Peter Jackson Rova.

In early Indo-European societies, guest–host relations played a fundamental role in the social fabric. Such relations were characterized by symmetry, involving social equals who mutually agreed to provide support and protection when needed. The roles of guest and host were fluid, with the understanding that a guest in the present would become a host for their current guest in the future, creating a reciprocal obligation. Hospitality and generosity were essential aspects of such relations, with elaborate displays of wealth and expenditure aimed at leaving a lasting impression on allies.

In contrast to guest–host relations, patronage relations in early Indo-European societies were hierarchical and involved economic dependence. In this system, the client depended on and was economically inferior to the patron. Roles were typically not exchanged, and the gifts presented by the client often carried symbolic significance. It is important

to note that the term "client" encompasses a broad range of professionals who relied on a patron's financial support, including poets and other hired individuals.

In his chapter, Riccardo Ginevra explores the mythologization of cultural others. This was a prevalent theme in early Indo-European societies, often centring around the notion of cattle-stealing monsters or snakes. Such mythological figures symbolized a threat to the pastoralist way of life and the accumulation of wealth. Ginevra applies a historical-comparative approach grounded in linguistics and philology to illustrate how monstrous and otherworldly entities in various early traditions are associated with the periphery of the known world, which was in turn associated with bodies of water, serving either as threats or protectors of the borderlands. This thematic exploration offers insights into how early Indo-European speakers understood their environment and the supernatural elements within them.

5. Threats to cattle, both real and imagined

Outside the mythological realm, real threats to cattle were prevalent. The pastures and fields beyond the settlement were undomesticated areas fraught with hidden threats. Livestock, the cornerstone of the economy, grazed in these areas, making cattle susceptible to attacks from predators (like wolves) and cattle-raiders.

Diseases among the livestock will have been another common concern. Udder infections, in particular, posed significant risks, endangering newborn calves and reducing milk production. In the absence of a modern understanding of bacteria and viruses, udder infections could be attributed to malevolent actors. Infected udders leading to decreased milk production and health issues were explained as being caused by venomous or poisonous chthonic creatures like snakes, lizards and toads, which inhabited the undomesticated areas below the grazing ground.

The chapter by Anders Richardt Jørgensen examines the linguistic evidence for an early Indo-European belief that chthonic creatures such as snakes, lizards and toads would suckle the udder of the livestock. He focuses on the possible Celtic evidence for a continuation of a Proto-Indo-European compound *$g^{w}o\underline{u}$-$d^{h}Vh_{1}$-, literally meaning 'cow-suckler' but applied to different chthonic creatures in the attested languages.

Addressing the threat posed by such chthonic creatures, even if largely imagined, required finding ways to resolve the conflict or to

mitigate its impact on the economy. A key objective seems to have been preventing these creatures from biting and suckling the udders of livestock and from stealing or poisoning their precious milk.

One approach to dealing with this issue is outlined in the chapter by Jenny H. Larsson, who looks into the Baltic customs of letting grass snakes coexist with the cattle. Grass snakes were traditionally served milk by humans in order to prevent them from potentially harming the cattle. Instead of eliminating the creatures believed to threaten the livestock, there was a cultural aversion to harming them in order not to invoke their ire. These beliefs are abundant in the post-medieval Baltic folklore, and Larsson traces their origin back to the earliest documents on Baltic pre-Christian religion, suggesting that these customs may, at least in part, originate from early Indo-European practices.

In her contribution, Birgit Anette Olsen further explores themes of snakes, milk and the underworld in the Indic tradition. She focuses on the *samudramanthana* myth in Hinduism, where the interplay of snakes and milk plays an important role in retrieving the *amṛ̊tam*, the divine drink that grants immortality to the gods. She argues that the tale ultimately arose from a recombination of inherited features rather than reflecting the direct inheritance of an old Indo-European myth.

The final contribution to this topic is the chapter by Davide Ermacora. In his text, Ermacora revisits and expands upon a previous work (Ermacora 2017) exploring the folklore motif of milk-suckling snakes. He investigates how this myth reflects vernacular perceptions of animal behaviour and anthropomorphism, especially in the context of snakes exhibiting human-like traits, such as a craving for milk. He furthermore examines the artistic and symbolic representations of this motif in different cultures.

6. Conclusion

The introduction of ecological perspectives into the study of Indo-European traditions may allow for a better historical understanding of human–animal relationships and the relationship between human and nature. Through the interdisciplinary approach applied in this book, we hope to have broadened the views on how early Indo-European cultures transformed the ecological realities into mythology and cosmological beliefs. Ultimately, this will allow us to better comprehend the relationship between household and nature, the tamed and the wild, and the here and the there.

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2. Strangers from the waters – serpents, canids, horses and others
Indo-European conceptions of human ecology and the CENTRE–PERIPHERY spatial schema[1]

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Abstract

The study provides a historical-comparative analysis of the linguistic and textual data attested in various Indo-European traditions in connection with beings associated with WATER and described as monstrous creatures, cosmic strangers and/or ontological others. On the basis of these entities' shared features, a conceptual system is reconstructed, which nicely fits into the set of beliefs that may be referred to as "Indo-European ecologies".

[1] This contribution stems from my 2022–2023 appointment as Associate in Hellenic Studies at Harvard University's Center for Hellenic Studies within the framework of the project "Concise Inventory of Greek Etymologies". For valuable criticism, discussion and help with various aspects of this research, I would like to express my gratitude to the other project members (Douglas Frame, Olga Levaniouk, Laura Massetti, Leonard Muellner and Gregory Nagy), as well as to Andrea Covini, Davide Ermacora, Peter Jackson Rova, Daniel Kölligan, Bruce Lincoln and Kim McCone. I also wish to thank Robert Tegethoff for improving my English version. The usual disclaimers apply.

Translations of classical sources, unless otherwise specified, are adapted from the Loeb Classical Library; other translations are adapted from van Buitenen 1973 (*Mahābhārata*), Faulkes 1987 (*Prose Edda*), Fulk 2012 (*Hákonarmál*), Gray 1982 (*Cath Mag Tuired*), Grendon 1909 (*Nine Herbs Charm*), Hoffner 1998 (KUB 17.5; KBo 22.178 + KUB 48.109), Jamison and Brereton 2014 (*Ṛgveda*), Larrington 2014 (*Poetic Edda*), Meyer 1906 (*Triads of Ireland*), O'Grady 1892 (*Caithréim Cellaig*), and Shastri and Bhatt 1985–1988 (*Brahmapurāṇa*).

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1. Introduction

The present contribution deals with several kinds of beings described within Indo-European (IE) mythological and legendary traditions as monstrous creatures, cosmic strangers and/or ontological others, all of which share an association with locations linked to the concept WATER. By means of a historical-comparative methodology rooted in linguistics and philology, it is argued that the shared features of these peripheral characters allow for the reconstruction of a system of associations that easily fit into some inherited cultural conceptions that, as explained immediately below, may be referred to as *Indo-European ecologies*.

According to widespread conventions, in the next sections lexemes are printed in italics (e.g. Vedic *áhi-* 'serpent') and conceptual items in small caps (e.g. WATER).

1.1. Indo-European ecologies

The English term *ecology*, most often currently used in the sense "branch of biology that deals with the relationships between living organisms and their environment[; a]lso: the relationships themselves" (*OED*, s.v. *ecology*, §1.a), is a compound of two lexical elements of Greek origin: the well-known English prefixoid *eco-* 'relating to the environment', a reflex of the Ancient Greek noun *oîkos* 'house, dwelling-place, home, household', and the equally widespread English suffixoid *-logy* 'science of, study of', which must ultimately be traced back to the Ancient Greek noun *lógos* 'computation, account, esteem, reason; speech, word, statement'. The various senses of Greek *lógos* may be broadly approximated by means of the English term *discourse*, in the two senses that are current within linguistics and humanities, namely "body of statements, analysis, opinions, etc., relating to a particular domain of intellectual or social activity […]; the set of shared beliefs, values, etc., implied or expressed by this" and "connected series of utterances by which meaning is communicated, esp. one forming a unit for analysis; spoken or written communication regarded as consisting of such utterances" (*OED*, s.v. *discourse*, §§7–8).

In its etymological sense, an *eco-logy* is thus a 'discourse on the household', i.e. a 'body of statements relating to the household, and the set of shared beliefs implied or expressed by such statements'. The phrase *IE ecologies* is here correspondingly used to refer to 'IE discourses on the household', i.e. bodies of statements relating to the household as attested within IE traditions, and the sets of shared beliefs implied or expressed by

such statements. This definition is actually relatively close to the current meaning of *human ecology*, which refers to the discipline that "addresses the relationships of humans to their environment" (Freese 2001: 6975): as it is impossible to reconstruct a Proto-Indo-European (PIE) word for 'environment' or 'nature', whereas, within the clan-based societies where the earliest varieties of IE were spoken, words for 'household' clearly referred to the centre of a human being's living environment, our best pathway to the reconstruction of prehistoric conceptions of human ecology is precisely the comparative analysis of historically attested IE discourses relating to the household, i.e. *IE ecologies*.

Given that most of the data analysed in this study occurs within texts that deal with mythological topics, it must be noted that an interest in the interrelationship between religion and ecology is nothing particularly new to the field of the history of religions. An "ecological approach to religion" was previously advocated by Åke Hultkrantz (1966; 1974), who first stressed the importance of the "ecological and technological conditions" within which a religion is practised (Hultkrantz 1966: 147–148). Within the field of IE studies, this ecological approach was successfully applied by Bruce Lincoln (1981: 49–162) to the Indo-Iranian belief system that may be reconstructed on the basis of correspondences between Vedic Sanskrit and Avestan religious texts. Lincoln's ecological investigation was part of a larger comparative analysis between the religions of the speakers of the Nuer language (South Sudan and Ethiopia) and of the earliest Indo-Iranian languages (Western and South Asia). Since the shared elements of Nuer and Indo-Iranian religious discourses may not be traced back to a common ancestor (Nuer being a Nilotic language, not an IE one), Lincoln convincingly linked them to the fact that "the ecological base of both cultures is the possession of cattle", which led him to the conclusion that "the given features of ecology serve to mould or shape culture, which in turn serves to mould or shape religion" (ibid.: 173).

Following Hultkrantz's (1974: 5) view that the means of subsistence of a religious community should be at the centre of any cross-cultural ecological comparison, Lincoln's comparative analysis focuses on the role of cattle, which both Nuer and Indo-Iranian speakers saw as "an integral part of the community", as the social order was "thought to include both people *and* cattle" (Lincoln 1981: 7; original emphasis).[2]

[2] For further references on this topic, see Lincoln 1981: 7 fn. 33 and Watkins 1995: 15.

Conversely, the present investigation takes as a starting point some features of a monstrous category that, in both Indo-Iranian and other IE mythological traditions, stood at the opposite end of the ecological space, as the adversaries par excellence of mythological heroes in their struggle for the possession of cattle: serpentine beings, explicitly identified with enemies and outsiders (Lincoln 1981: 107; 122),[3] who are often said to be located by the WATER.

1.2. IE serpents of the (watery) deep

As is well known, the onomastics and phraseology occurring in texts composed in a variety of ancient IE languages allow for the comparative reconstruction of an inherited mythological figure that may be referred to as the "Serpent of the Deep": a SERPENTINE BEING who lives in DEEP WATER.[4] Such beasts are especially well attested in Indic and Norse mythology, with the former tradition recording at least three mythical characters that are relevant to this investigation.

First, Vedic *Áhi- Bhudnyá-* "Serpent of-the-Deep" (see [1]) is attested as the name of a "water-born serpent" who "sits in the depth of the rivers, in the dusky realms" in [2], and who "has been set in the depths" – a place most likely identical to "the seat of the waters" – in [3]. More precisely, within the passage [2], the locative *rájassu* 'in the dusky realms' clearly refers to the same location as *budhné nadī́nāṁ* "in the depth of the rivers", whereas, in the next passage [3], the locative *budhnéṣu* 'in the depths' is contextually associated with the goal *apáaṁ sádanāya* "toward the seat of the waters". The same connection between *rájas-* 'dusky realm', *budhná-* 'depth, base, foundation' and the concept WATER is attested in a further passage (see [4]) where the phrase *budhné rájaso* "at the base of the realm" is used to refer to the birth-place of the god Agni ('Fire'), who was famously born *apā́m upásthe* "in the lap of the Waters" (see [5]). Such parallels allow for the interpretation of the name "Serpent of the Deep" as specifically referring to DEEP WATER, and not just to any deep location: we are dealing with a "Serpent of Deep Water", or a "Serpent of the Watery Depth", here.[5]

[3] See Lincoln 1981: 122 and *passim* for further features of this reconstructed myth, which are not relevant to the investigation at hand.

[4] This section is based on Ginevra 2024a: 159–173.

[5] Words and phrases that are particularly relevant to the discussion will be marked in bold type in the examples.

[1] *mā́ no* ***áhir budhníyo*** *riṣé dhād / asmā́kam bhūd upamātivániḥ*
"Let **the Serpent of the Deep** not set us up to suffer harm.
For us let there be winnings at the distribution (of prizes)"
(RV 5.41.16de)

[2] ***abjáam*** *ukthaír* ***áhiṁ*** *gṛṇīṣe /* ***budhné nadī́nāṁ rájassu ṣī́dan*** *// mā́ no* ***áhir budhníyo*** *riṣé dhān / mā́ yajñó asya sridhad ṛtāyóḥ* "I will sing **to the water-born serpent** with hymns: **he is sitting in the depth of the rivers, in the dusky realms**. Let **the Serpent of the Deep** not set us up for harm; let the sacrifice of him who seeks the truth not fail." (RV 7.34.16–17)

[3] *utá no náktam* ***apáaṁ*** *vṛṣaṇvasū / sū́ryāmā́sā* ***sádanāya*** *sadhaníyā / sácā yát* ***sā́di*** *eṣaam /* ***áhir budhnéṣu budhníyaḥ***
"And for us by night (and by day), o you two of bullish goods [= Aśvins], the Sun and Moon are our joint guides **toward the seat of the waters**, when in company with them **the Serpent of the Deep has been set in the depths**" (RV 10.93.5)

[4] ***sá jāyata*** *prathamáḥ pastíyāsu / mahó* ***budhné rájaso*** *asyá yónau* "**He** (**Agni**) **was born** first in the dwelling places, **at the base of this** great **realm**, as his womb" (RV 4.1.11ab)

[5] ***apā́m upásthe mahiṣó*** *vavardha* "**The buffalo** (**Agni**) has grown strong **in the lap of the waters**" (RV 10.8.1d)

The formulaic line *mā́ no áhir budhníyo riṣé dhād* "let the Serpent of the Deep not set us up to suffer harm", occurring both in [1] and [2], attests to the fact that this divine character was not only invoked in prayers as a god but also seen as a potentially harmful character: as already proposed by Macdonell (1897: 73), this "baleful aspect" of the Serpent of the Deep may be evidence of the fact that the beast "was originally not different from Ahi Vṛtra" and represented the latter's "beneficent side" (ibid.: 153).

The most famous antagonist of Vedic mythology, the great 'serpent' (*áhi-*) called *Vṛtrá-* 'Obstacle', is said to be killed by the warrior-god Indra (e.g. in [6]) within a dragon-slaying myth whose IE heritage is the main topic of a famous book by Calvert Watkins (1995). As noted by Watkins (ibid.: 298), a connection with chthonic waters is "a general attribute of the dragon" who is slain by the warrior-god in Indo-Iranian myth; the same scholar (ibid.: 460–463, with an overview of previous relevant scholarship) also argues for the original identity of the Dragon and the Serpent of the Deep in Indic and IE mythology in general. This identification finds support, inter alia, in the fact that

passages describing the location of Vr̥tra attest the same connection between *rájas-* 'dusky realm', *budhná-* 'depth, base, foundation' and the concept WATER noticed above for the location of the Serpent of the Deep: in text [7], the location *rájaso budhnám* "on the foundation of the dusky realm", where Vr̥tra is said to lie, has the same referent as the locative *pravaṇé* 'in the (waters') torrent'. Vr̥tra's connection with WATER is further attested by his mother's name, *Dā́nu-* (see [8]), which is identical with a neuter noun meaning 'drop, stream' (also attested once as a feminine); the same name is also used to refer to Vr̥tra himself, who also has a *vr̥ddhi* metronymic *Dānavá-* '(son) of Dānu', which may also be interpreted as '(the serpent) of the drops, of the streams'.[6]

[6] *áhan* ***vr̥trám*** *vr̥tratáraṁ víaṁsam / índro vájreṇa mahatā́ vadhéna / skándhāṁsīva kúliśenā vívr̥kṇā / **áhiḥ** śayata upapŕ̥k pr̥thivyā́ḥ* "Indra smashed **Vr̥tra [/Obstacle]** the very great obstacle, whose shoulders were spread apart, with his mace, his great weapon. Like logs hewn apart by an axe, **the serpent** would lie, embracing the earth [/soaking the earth (with his blood)]" (RV 1.32.5)

[7] *apó vr̥tvī́* ***rájaso budhnám ā́śayat*** */ vr̥trásya yát* ***pravaṇé*** *durgŕ̥bhiśvano / nijaghántha hánuvor indra tanyatúm* "**He [=Vr̥tra]**, having obstructed the waters, **was lying on the foundation of the dusky realm**, when you, Indra, struck your thunder down upon the jaws of Vr̥tra, Hard-to-Grasp, **in the (waters') torrent**" (RV 1.52.6bcd)

[8] *nīcā́vayā abhavad* ***vr̥tráputrā*** */ índro asyā́ áva vádhar jabhāra / úttarā sū́r ádharaḥ putrá āsīd /* ***dā́nuḥ*** *śaye sahávatsā ná dhenúḥ* "The strength of **Vr̥tra's mother** ebbed; Indra bore his weapon down upon her. The mother was above; the son below: **Dānu** lies like a milk-cow with her calf" (RV 1.32.9)

A third relevant character attested in the Indic epic tradition is the great serpent Śeṣa, also known as Ananta, who supports the earth from beneath, lying around the four oceans. While this serpentine being is not usually linked to either the Serpent of the Deep or Vr̥tra, he clearly shares the associations of both with the concepts DEPTH and WATER: various passages of the *Mahābhārata* (see [9], [10] and [11]) describe

[6] On the character of Dānu and this lexical family, see e.g. Macdonell 1897: 158; *EWAia*: 719–720; Jamison 2021, ad 1.32.9.

Śeṣa as he carries the earth on his head from beneath, lying with his endless coils around its circumference (as in [10]) or around the oceans (as in [9]) that surround it (see [11]).

[9] ***bibharti*** *devīṃ śirasā* ***mahīm*** *imāṃ* ***samudranemiṃ parigṛhya sarvataḥ*** "(**Śeṣa**) **carries** the Goddess **Earth** on his head, **encompassing all around the circumference of the oceans**" (*Mahābhārata* 1.32.22.2)

[10] ***śeṣo*** *'si nāgottama dharmadevo* ***mahīm*** *imāṃ* ***dhārayase*** *yad ekaḥ /* ***anantabhogaḥ parigṛhya sarvāṃ*** *yathāham evaṃ balabhid yathā vā* "Thou art **Śeṣa**, greatest of Snakes, thou art the God of Law, for thou alone **lendest support to** this **earth, encircling her entire with endless coils**, not less than I support her, or the Cleaver of Vala" (*Mahābhārata* 1.32.23)

[11] ***catuḥsamudraparyantāṃ*** *merumandarabhūṣaṇām /* ***śeṣo bhūtvāham*** *evaitāṃ* ***dhārayāmi vasuṃdharām*** "**as Śeṣa I support this treasure-filled earth that is girt by the four oceans** and adorned with the Meru and Mandara" (*Mahābhārata* 3.187.10)

As long noted (e.g. West 2007: 347–348), the great serpents of Indic myth have close parallels in the Norse mythological serpent par excellence: the *Miðgarðsormr* 'Midgard Serpent', also known as *Jǫrmungandr* (of unclear meaning), a giant snake that lies at the bottom of the ocean. As Thor's greatest adversary, the Midgard Serpent is the Norse counterpart to the Indic warrior-god Indra's adversary Vr̥tra (see Watkins 1995: 419–424), but, as shown in [12], the Norse snake is also closely associated with the concepts DEPTH and WATER, like the Vedic Serpent of the Deep and the epic snake Śeṣa and, as the latter, he is even said to surround all lands with his endless coils. Furthermore, just like Śeṣa upholds the earth from beneath, the Midgard Serpent is also linked to the balance between ocean and land, as attested in [13]: when the End of Time (Ragnarok) comes, the Midgard Serpent shall leave the ocean and "make its way ashore", and all lands will be covered in water.

[12] *kastaði hann* ***orminum í inn djúpa sæ er liggr um ǫll lǫnd****, ok óx sá ormr svá at hann* ***liggr í miðju hafinu of ǫll lǫnd*** *ok bítr í sporð sér*. "he (Odin) threw **the serpent into that deep sea which lies round all lands**, and this serpent grew so that it **lies**

in the midst of the ocean encircling all lands and bites on its own tail" (Snorri Sturluson, *Gylfaginning* 34)

[13] *Þá* ***geysisk hafit á lǫndin*** *fyrir því at þá snýsk* ***Miðgarðsormr*** *í jǫtunmóð ok* ***sækir upp á landit***. "Then **the ocean will surge up on to the lands** because the **Midgard serpent** will fly into a giant rage and **make its way ashore**" (*Gylfaginning* 51)

As is well known, the Indic and Norse "Serpents of Deep Water" have various counterparts in other IE traditions, such as the Ancient Greek monster associated with the underground spring of Delphi and famously slain by the god Apollo: the Python (sometimes described as a male, but sometimes as a female and referred to as *drákaina* 'she-dragon'). As seen in [14] and [15], this Greek monster is called both *óphis* 'serpent', which is a reflex of PIE $*h_3ég^{wh}i$- 'id.' (Beekes 2010, s.v. ὄφις) and thus an exact cognate of Vedic Sanskrit *áhi*- 'id.', as well as *Pýth-ōn*, a proper name clearly linked with the toponym *Pyth-ṓ* for Delphi and reflecting the same PIE root $*b^hud^h$- 'deep' occurring in Vedic *budhnyá*- 'of the deep'. Greek *Pýthōn óphis* "the snake Python" in [14] is thus a very close etymological match for the Vedic name *Áhi-Budhnyá*- "Serpent of-the-Deep".

[14] ἦκεν εἰς Δελφούς, χρησμῳδούσης τότε Θέμιδος· ὡς δὲ ὁ φρουρῶν τὸ μαντεῖον **Πύθων ὄφις** ἐκώλυεν αὐτὸν παρελθεῖν ἐπὶ τὸ **χάσμα**, τοῦτον ἀνελὼν τὸ μαντεῖον παραλαμβάνει "he (Apollo) came to Delphi, where Themis at that time used to deliver oracles and when the **snake Python**, which guarded the oracle, would have hindered him from approaching the **chasm**, he killed it and took over the oracle" (Apollodorus 1.4)

[15] **Πυθώ** τοι κατιόντι συνήντετο δαιμόνιος θήρ, / αἰνὸς **ὄφις**. τὸν μὲν σὺ κατήναρες ἄλλον ἐπ' ἄλλῳ / βάλλων ὠκὺν ὀϊστόν "As thou wert going down to **Pytho**, there met thee a beast unearthly, a dread **snake**. And him thou didst slay, shooting swift arrows one upon the other" (Callimachus *Hymn* 2.100–102)

The parallels between all the mythological deep-water serpents mentioned so far have been subject to extensive treatment elsewhere (e.g. Toporov 1974; Watkins 1995: 460–463; West 2007: 255–259; 347–349; Ginevra 2024a:159–173) and shall not be discussed any

further in this contribution.[7] The present study rather focuses on the linguistic and conceptual association between mythological SERPENTS and DEEP WATER and on its cultural significance, which has been described as puzzling by scholars such as Martin L. West (2007: 348), who notes that "[i]f the Indo-Europeans had a myth of a great serpent of the watery deeps, we must confess that we do not know what it signified". The same scholar (ibid.: 349) also observed that "[t]he idea that it encircled the whole earth would seem to presuppose the belief that the earth was surrounded by water", but "we have no sufficient ground for attributing it to the IEs", even though this view is explicitly attested in Indic, Germanic and Greek sources. This apparently problematic system of conceptual associations may be summarized as in Table 1 below.

Table 1. Association between SERPENTS and (DEEP) WATER surrounding the EARTH.

SERPENTS		
(DEEP) WATER	surrounding	EARTH, LAND

1.3. Aim, methodology and structure of the study

The aim of this contribution is to propose that the conceptual association with the location (DEEP) WATER is not an exclusive trait of mythological SERPENTS in IE mythology but rather a common feature of several mythological others (both monstrous and not) within IE traditions, and that

[7] Further etymological and thematic parallels have been noted by Toporov (1974) and Martirosyan (2018) in folklore from two modern IE traditions, those on the Serbo-Croatian *bȁdnjāk* 'yule log' and the Armenian *Andndayin ōj* "Abyssal Serpent", respectively, both of which seem to attest reflexes of PIE **bʰudʰ*- 'deep' as well (Armenian *ōj* may also be related to AGk *óphis* and Vedic *áhi*-, see Martirosyan 2018: 193 and fn. 5 with references). As pointed out to me by Kim McCone (pers. comm.), a further interesting parallel is provided by the Irish saga *Togail Bruidne Da Derga* (lines 502–503 in Knott 1936), where a character utters the following words: "unless it is the Leviathan which encircles the world [*in Leuidan timchella in domun*], that strikes its tail to put the earth over its head". As noted by McCone, no biblical descriptions of the Leviathan (Job 41, Psalms 74:14 and 104:26, Isaiah 27:1) ever make any reference to it encircling the world. Knott (1936: 82) notices that this "medieval belief" is common to both Irish and Norse mythology; McCone thus suggests that we may be dealing with an inherited earth-girding sea monster secondarily identified with the biblical Leviathan by a monastic redactor of the extant saga. A similar remark was also independently made by Martin West (2007: 348 fn. 29), who even mentions a passage of Pseudo-Bede (*De mundi constitutione*, *Patrol. Lat. cx*. 884) as a further possible reflex of this theme, but also cautions that both texts may reflect Rabbinical lore.

this association rests on the conceptualization of the location WATER as a periphery of human ecology in IE culture. This proposal will be argued for by means of a historical-comparative analysis of the conceptual associations, onomastics and phraseology linked to a series of mythological and legendary creatures associated with WATER within IE traditions. Phraseological items will be represented according to the conventional system [SEMANTIC.ELEMENT (*corresponding.lexemes*) – semantic/syntactic.relationship SEMANTIC.ELEMENT (*corresponding.lexemes*)]: e.g. the association between two concepts SERPENT and DEPTH underlies the inherited phrase [SERPENT (**h*$_3$*ég*^{wh}*i-*) – of the DEEP (**b*^{h}*ud*^{h}*-*)] that may be reconstructed on the basis of the Vedic name *Áhi- Budhnyá-* "Serpent of-the-Deep" and of the Ancient Greek *Pýthōn óphis* "the snake Python" discussed above.

The study is structured as follows. Section 2 is devoted to SERPENTS in general; it is argued that not all IE legendary and mythological serpents are associated with WATER, nor are they always HOSTILE, but most are PERIPHERAL beings who are said to "come from somewhere else". Section 3 is devoted to WATER-creatures other than SERPENTS: several mythological beings described as HOSTILE or FRIENDLY OTHERS, both zoomorphic (canids and horses) and humanoid, are shown to share an association with WATER. The last part, Section 4, is devoted to the conceptualization of WATER as a PERIPHERY of HUMAN LIFE, identified as a possible reason for the connection of SERPENTS and other mythological OTHERS with WATER, while the idea that earth was surrounded by water is thus shown to nicely fit in the way human ecology was conceptualized by the earliest speakers of IE varieties.

2. Serpents as peripheral beings: serpentine enemies and guests

Even though the "Serpents of Deep Water" attested (among others) in the Indic and Norse traditions may securely be reconstructed as an inherited feature of IE poetic culture, it must be pointed out that, within IE traditional texts, SERPENTS are not always described as HOSTILE beings living in or arriving from WATERY places but rather as PERIPHERAL beings that may be either FRIENDLY (i.e. GUESTS) or HOSTILE (i.e. ENEMIES).[8]

[8] On the (most likely universal) ambivalent attitude of human communities towards strangers, see, e.g. Paul Thieme's (1938) classic study of the Vedic term *arí-* 'stranger', which occurs in very diverse contexts where it can refer to either a 'guest' or an 'enemy'.

In Hittite myth and Old English poetry, e.g. HOSTILE SERPENTS are described as creatures that COME (i.e. move towards a conceptual CENTRE or deictic HERE) from PERIPHERAL locations (a deictic THERE) to the place that they will torment – with no reference whatsoever to WATER. In Hittite passage [16], from a narrative about the monster called *Illuyanka-* 'Serpent', the latter is invited as a GUEST in a feast thrown by the goddess Inara, a banquet to which the Serpent and his offspring are said to "come up" (*šarā wēr*) and from which, after the feast, they do not want to "go back down into their hole again" (*namma ḫattešnaš kattand*[*a*²] *pānzi*), thus overstaying their welcome as GUESTS and becoming ENEMIES. Within text [17], from the Old English epic poem *Beowulf*, the great serpent who kills the hero Beowulf and destroys his kingdom, called *wyrm* 'worm, serpent, dragon', lives in a barrow (a traditional Germanic theme) and thus not in water, but is said to 'come' (*cwōm*) like a "terrible evil-guest" (*atol inwit-gæst*), figuratively fulfilling both roles of GUEST and ENEMY. In passage [18] from the Old English *Nine Herbs Charm*, a *wyrm* 'worm, serpent, dragon' (the same word used for *Beowulf*'s serpent) is said to "come sneaking" (*com snican*) from some PERIPHERY to a location where it kills a human being, prompting the god Woden's slaying of the beast; the charm is explicitly said to make it impossible for the snake to enter the HOUSEHOLD (*on hus bugan* "go into the house") from some unspecified PERIPHERY.

[16] ^{d}*inarašš=a=z unuttat n=ašta* ^{MUŠ}***illuyank*[*an*]** ***ḫantešnaz šarā*** *kallišta kāša=wa* EZEN$_4$*-an iyami nu=wa adanna akuwanna* ***eḫu n=ašta*** ^{MUŠ}***illuyankaš QADU*** **[DUMU**^{MEŠ}***-ŠU*****]** ***šarā wēr*** *nu=za eter ekwe*[*r*] *n=ašta* ^{DUG}*palḫan ḫūmandan ek*[*wer*] ***n=e=za ninkēr n=e namma ḫattešnaš kattand***[*a*²] ***nūmān pānzi*** "Inara dressed herself up and called **the serpent up from its hole**, (saying:) 'I'm preparing a feast. **Come** eat and drink.' **The serpent and [his offspring] came up**, and they ate and drank. They drank up every vessel, so that they became drunk. **Now they do not want to go back down into their hole again.**" (KUB 17.5 Vs. I 5'–14')

[17] *Æfter ðām wordum* ***wyrm*** *yrre* ***cwōm***, / *atol* ***inwitgæst*** *ōðre sīðe* / *fȳrwylmum fāh fīonda nīos(i)an*, / *lāðra manna* "After these words, the **worm came** in anger, terrible **evil-guest**, a second time, with hostile swirling fires, in pursuit of his enemies" (*Beowulf* 2669–2672)

[18] ***Wyrm com snican, toslat he man***; / *ða genam Woden VIIII wuldortanas / sloh ða þa næddran þæt heo on VIIII tofleah. / þær geændade æppel and attor*, / ***þæt heo næfre ne wolde on hus bugan*** "A **worm came sneaking, it slew a man**. Then Woden took nine glory-twigs and struck the serpent so that in nine parts it flew. There the apple destroyed (the serpent) and its poison, **so that it never should go into the house**" (*Nine Herbs Charm* 31–35)

In [16] and [17] above, HOSTILE SERPENTS are described as unwanted GUESTS, i.e. ANTI-GUESTS (on which see Watkins 1995: 404–407; Jackson 2014), but SERPENTS may also have FRIENDLY, GUEST-like relationships with human beings, as attested in, e.g. the Indic and Baltic traditions. In the Sanskrit epic *Mahābhārata*, lexemes for 'serpent' like *nāga-* and *pannaga-* refer to sentient creatures who, as shown in [19], are organized in a human-like monarchic society based on fixed rules and may even be on FRIENDLY terms with human beings, to the point of contracting matrimony with them. As for the Baltic traditions, Jenny Larsson (this volume) discusses the archaic Baltic custom of keeping snakes at home, feeding them and treating them like gods, as attested, e.g. in text [20] from a 1557 report by Sigismund von Herberstein of a journey through north-western Lithuania. Such a custom (if it was ever historically practised) or belief clearly rests on the idea that SERPENTS may behave FRIENDLY towards human beings, to the point of living within their own HOUSEHOLD (which is not usually attested for such creatures).

[19] *tasya śāpasya śāntyarthaṃ* ***pradadau pannagottamaḥ / svasāram ṛṣaye*** *tasmai suvratāya tapasvine // sa ca tāṃ pratijagrāha vidhidṛṣṭena karmaṇā / āstīko nāma putraśca tasyāṃ jajñe mahātmanaḥ* "It was to appease this curse that **the princely Snake gave his sister to the** great-spirited (**human**) **seer** of good vows. And he accepted her with the ritual that is found in the Rules. A son was born to her: the strong-willed Āstīka" (*Mahābhārata* 1.13.36–1.13.37)

[20] "Even today one can find many pagan beliefs in these remote lands; some people [worship] fire, others trees, furthermore the sun and moon. However, there are others who keep their gods in their homes, i.e. snakes, resembling lizards but larger, with four legs, black and thick, measuring about three spans in length. Some call them Giowites, others Jastzuka, and still others Szmya. **They have a certain time when they feed their gods. They place some milk in the middle of the**

> **house and then kneel down on the benches. Then the snake crawls out** and hisses at the people like angry geese and the people pray to them with great reverence. If something bad happens to someone, then he blames himself for not having fed his god properly." (Sigismund von Herberstein, *Rerum Moscoviticarum Commentarii*, from Larsson, this volume)

To sum up briefly what has been discussed so far, in IE mythological and religious traditions SERPENTS are not always associated with WATER, but they are usually described as PERIPHERAL creatures who COME from "somewhere else" (a conceptual PERIPHERY, a deictic THERE), at least from the perspective of the human authors or protagonists of these texts (their conceptual CENTRE, a deictic HERE). From this point of view, SERPENTS can either be HOSTILE (ENEMIES) or FRIENDLY (GUESTS), but they are always clearly separate from – "other than" – HUMAN BEINGS (or their patrons, the gods). SERPENTS may thus be described as quintessential ontological OTHERS belonging to a separate social group, a so-called OUT-GROUP, in opposition to the IN-GROUP represented by one's own HOUSEHOLD. This system of associations may be summarized as in Table 2.

Table 2. Association between SERPENTS, PERIPHERY and OUT-GROUP.

SERPENTS	different from, other than	HUMANS
PERIPHERY, THERE	opposed to	CENTRE, HERE
OUT-GROUP, OTHERS	hostile or friendly towards	IN-GROUP, HOUSEHOLD

3. Peripheral water-creatures: enemies and guests from the waters

Serpentine beings like the "Serpent of the Deep" are not the only hostile mythological characters associated with water. Creatures linked with aquatic environments are a special category in IE mythology, and the linguistic data attested by the phraseology and onomastics associated with these creatures deserves particular attention. Each of the following subsections is devoted to a specific category of water-creatures that is cross-culturally attested in several IE traditions: hostile WATER-CANIDS (3.1), hostile WATER-HORSES (3.2) and hostile and friendly WATER-HUMANOIDS (3.3).[9]

[9] Parts of this section are based on Ginevra 2024a: 173–194.

3.1. Monstrous canids from the waters

A first monstrous "Canid from the Waters" is attested in texts from medieval Scandinavia (but possibly even earlier in Scandinavian art):[10] the Norse monster called *Fenris-ulfr*, or simply *Fenrir*. As is well known, this mythological wolf, a brother of the Midgard Serpent, is destined to destroy the universe and the gods, and is thus taken by the deities to a water basin, "a lake called Amsvartnir" (see [21]), in order to imprison him; there he lies, immobilized, "at the mouth of a river" until Ragnarok, the End of Time (see [22]). Then, Fenrir shall get free from his water-prison, come to land with the enemies of the gods and slay deities like Odin (see [23]), contributing (together with his brother the Midgard Serpent; see above [13]) to the final destruction of the world (see [24]).

[21] *allar spár sǫgðu at hann mundi vera lagðr til skaða þeim* […] *Þá fóru Æsirnir út í* ***vatn þat er Ámsvartnir heitir****, í hólm þann er Lyngvi er kallaðr, ok* ***kǫlluðu með sér úlfinn*** "all prophecies foretold that it (Fenrir) was destined to cause them harm […] Then the gods went out on to **a lake called Amsvartnir**, onto an island called Lyngvi, and **summoned with them the wolf**" (*Gylfaginning* 34)

[22] ***Úlf*** *sé ec* ***liggia / árósi fyrir,*** */ unz riúfaz regin* "**A wolf** (Fenrir) I see **lying before a river mouth**, until the Powers are torn asunder" (*Lokasenna* 41.1–41.3)

[23] ***Muspells megir*** *sœkja fram á þann vǫll er Vígríðr heitir.* ***Þar kemr ok þá Fenrisúlfr*** […] ***Úlfrinn gleypir Óðin****. Verðr þat hans bani* "**Muspell's lads (i.e. the enemies of the gods)** will advance to the field called Vigrid. **Then there will also arrive there Fenriswolf** […] **The wolf (Fenrir) will swallow Odin**. That will be the cause of his death." (*Gylfaginning* 51)

[24] *Mun* ***óbundinn / á ýta sjǫt / Fenrisulfr fara,*** */ áðr jafngóðr / á auða trǫð / konungmaðr komi* "**The wolf Fenrir, unbound, will enter the abode of men** (i.e. **the world will end**) before so good a royal person comes onto the vacant path" (Eyvindr skáldaspillir Finnsson, *Hákonarmál* 20).

Old Norse *Fen-ri-r* (which I analyse as a reflex of **fanį̂-arią-z*) is clearly etymologically linked to the term *fen* 'water basin, swamp, fen', as has

[10] See also, e.g., Oehrl 2011: 194.

long been noted,[11] and basically means '(the one) of the water basin, swamp, fen'; the name *Fenris-ulfr* may correspondingly be loosely translated as 'Wolf of the Fen', allowing for the identification, both on mythological (as a WOLF imprisoned in a WATERY location) and onomastic grounds, of Fenrir as the reflex of a "monstrous WATER-CANID" motif that, as argued in the remainder of this section, has correspondences in at least two other IE traditions. Further parallels involving Fenrir's mythological role as an eschatological world-destroyer are discussed in the next two sections (3.2 and 3.3).

ON *fen* is the outcome of Proto-Germanic **fanía-* 'water basin, swamp, fen', expected reflex of PIE **ponío-*, also attested by Proto-Baltic **panía-* (Old Prussian *pannean* 'id.' and Eastern Lithuanian *pania°* in *pania-bùdė* 'mushroom growing in humid places') and close to Proto-Baltic **panīā* (Latvian *pane* 'water with dung').[12] These correspondences allow for the reconstruction of a PIE neuter **pon-íe/o-* 'basin of (stagnating) water, swamp' with a collective plural **pon-íeh₂-*.[13] The same PIE lexical root **pen-* 'humid, water' is also attested by Old Irish *en* 'water' and Irish *enach* 'swamp', reflexes of Proto-Celtic **en-o-* (from PIE **pen-o-*) and **enā-ko-*, respectively, with the latter being a *-ko-* derivative of Proto-Celtic **en-ā-* (from PIE **pen-eh₂-*), attested by Gaulish *anam* '*paludem*' and Middle Irish *an* 'water'.[14] A further close Celtic parallel for Old

[11] For a closer look at the formal analysis and semantic interpretation of ON *Fenrir*, see Ginevra 2018a: 295–336. A connection of *Fenrir* with ON *fen* underlies various other etymological proposals (see Dillmann 1994: 367; Deeg 2016: 66–69) and goes back at least to Weinhold (1849: 17), if not to Snorri himself (as argued by Deeg 2016: 69–74).

[12] On this lexical family, see *EWA*, s.v. *fenni*; Mažiulis 1988–1997, s.v. *pannean*; Petit 2010: 148.

[13] Further derivatives of a PIE lexical root **pen-* 'humid, water' are also attested, e.g., by the reflexes of Proto-Germanic **fun-h-ta* 'humid' (Old English *fūht*, Old High German *fūht-*, German *Feucht*), reflex of PIE **pn̥-k-tó-*, maybe with the same velar-suffix of Proto-Germanic **fan-ga-*, perhaps attested as a loan in Romance (Italian *fango*) and reflex of the same PIE **ponkó-* attested in Vedic *páṅka-* 'mud' (see *EWAia*, s.v.). Romance formations like Italian *fango* may also be loans from Proto-Germanic **fanja-*; see Italian *vengo* from Latin *venio*.

[14] This etymology is often regarded as doubtful because of the initial *a* instead of *e* (Matasović 2009, s.v. **feno-*), but this is unnecessary (Ginevra 2018b: 71 fn. 18), as these forms may reflect a secondary stem **an-a-* developed by analogical levelling on the basis of acc. sg. **an-am* (with shortening of *ā* after nasal, see McCone 1996: 61) and voc. sg. **an-a* (with expected short **-a*, see Joseph 1980: 17), where Proto-Celtic **an-a* developed from **en-a-* by Joseph's Rule. Of course, Joseph himself restricts his law to the effects of non-final *a*, but he does so chiefly on account of the acc. sg. *bein* (**ben-am*) of Old Irish *ben* 'woman', whose development may have actually been influenced by other analogical processes (see Matasović 2009, s.v. **benā*, **bena*).

Norse *fen* (PIE **pon-i̯o-*) in *Fen-rir* may thus be found in Old Irish *on°* 'water' (PIE **pon-o-*), which occurs as first element of compounds such as *on-fais* 'immersion' and *On-chú* 'water-dog'.

The latter is one of the names, first attested in texts from medieval Ireland, of our second monstrous "Canid from the Waters": the Irish monster called *On-chú* or *Dobar-chú* 'water-dog'. The compound *On-chú* 'water-dog' (also attested as a masculine anthroponym) already occurs in early Irish texts, such as *Mesca Ulad* (see [25]), as the name of a species of fantastic beasts,[15] which are described in Irish folklore as ferocious monsters who live in water basins (*on°*), especially lakes, from where they come out in order to slay human beings and livestock (Williams 1989: 66), as exemplified by text [26] from the Early Modern Irish romance *Caithréim Cellaig*, where a female Onchú living by two lakes is said to kill nine people. Just like the Norse Fenrir Wolf, the Irish Onchú is thus a ferocious canid linked to water basins, and the two monsters may have even shared similar iconographic representations, as they are both described with gaping mouths (indexically referring to their voracious nature) in [25] and [27] (the latter also matches Fenrir's representation on the so-called Gosforth Cross, on which see Oehrl 2011: 162–166). It must correspondingly be noted that both *Fenris-ulfr* and *On-chú* are compounds whose first element may ultimately be traced back to a thematic derivative with *-o-* grade of the PIE root **pen-* 'humid' and whose second elements refers to a canid ('wolf' and 'dog', respectively): these onomastic and thematic parallels allow for the identification of both names as reflexes of an inherited phrase [CANID – of WATER (**pon-(i̯)o-*)], which may have been used in prehistoric times to refer to a monstrous mythological beast.

[25] ***Onchú óbéli*** *cechtar a dá gúaland* "An **Onchú with gaping mouth** on each of his shoulders" (*Mesca Ulad* 724–725)

[26] […] ***Loch Con 7 Loch Cuilind*** *7 do éirig* ***onchú neimneach*** *do bí ar an c*[*h*]*oingilt dóib 7 ro marb nónbar dia muindtir 'na f*[*h*]*iadnaisi féin* "[…] **Lake Con and Lake Cuilinn**. To guard which Congheilt **a venomous Onchú** opposed them, presently and before his face killing nine of his people" (*Caithréim Cellaig* 534–536; Mulchrone 1933: 17)

[27] *En* ***Fenrisúlfr ferr með gapanda munn*** *ok er hinn efri kjǫptr við himni en hinn neðri við jǫrðu.* ***Gapa mundi hann meira ef rúm***

[15] Also attested as a masculine proper name; cf. *EWA*, s.v. *fenni*.

> ***væri til*** "But **Fenriswolf will go with mouth agape** and its upper jaw will be against the sky and its lower one against the earth. **It would gape wider if there was room**" (*Gylfaginning* 51)

The Irish Onchú was most likely a hybrid monster, half-reptile and half-mammal (Williams 1989: 71–74), just like the Norse wolf Fenrir on the Gosforth Cross (Oehrl 2011: 165), as well as the Greek monsters Scylla and Typhon (on which see below). Various scholars (e.g. Nagy 1985–1986) identify the Onchú with the otter, whose Old Irish name *dobur-chú* (also attested as a masculine anthroponym) literally means 'water-dog' as well. In addition to being a term for 'otter', however, *Dobar-chú* 'water-dog' is also used as the name of a legendary monster of Irish folklore, a beast that was still thought to attack and kill humans in the eighteenth century, as shown by the famous case of Grace Connolly from Lake Glenade, who according to her husband was killed by a Dobarchú in 1722. Just like the Onchú, the Dobarchú is said to infest water basins (Williams 1989: 74), and is still (rarely) spotted by Irish cryptozoologists (just like Nessie in Scotland). From an etymological perspective, Old Irish *dobur-chú* and its exact Welsh cognate *dyfr-gi* 'water-dog, i.e. otter' both reflect Proto-Celtic **dubro-kū-* 'water-dog', a compound of **kū-* 'dog' (reflex of PIE **ḱu̯ṓn-*) and **dubro*° 'water'.[16] The latter is a substantivization of PIE **dʰubʰ-ró-* 'deep, dark, dirty' (Matasović 2009, s.v.), a derivative of the same PIE lexical root **dʰeu̯bʰ-* that also underlies Greek *Typháōn* (see Watkins 1995: 461–462). Therefore, while *On-chú* is etymologically linked to Old Norse *Fenrir* (both reflecting PIE **pen-* 'water, humid'), *Dobar-chú* is etymologically linked to Greek *Typʰáōn*, name of another IE mythological water-being analysed below (Section 3.3). These two synonyms may be interpreted as two variant names of the same legendary beast, a Celtic Water-Dog with close parallels in the Norse Wolf of the Fen Fenrir and in the Greek sea-dog Scylla, discussed immediately below. This Irish Water-Dog may at some point have been identified with the otter, of course, but as noted by Pettit (2016: 69) in his treatment of the Onchú, "if it is an otter, it is a *monstrous* otter" (original emphasis).[17]

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[16] A lexeme attested by Gaulish *dubra-*, Old Irish *dobor*, Welsh *dwfyr*, MCorn. *dowr* and Bret. *dour* (Matasović 2009, s.v.; Schrijver 1995: 353).

[17] In later hagiographic narratives about Christian saints, water-dogs/otters are also attested as benevolent figures (Nagy 1985–1986: 126–127); rather than showing that these creatures were thought to be friendly, however, the friendship between a saint

The third mythological tradition relevant for this section is the Greek one, which attests at least two monstrous water-beings who are said to have canid features: Scylla, "the sea she-dog", and her half-sister the Hydra, "the she-hound of Lerna". According to Greek mythology, Scylla, daughter of Typhon and Echidna according to text [31] (but of Kratais and Trienus/Phorkos according to text [30]), lived in a cave close to the sea by the Strait of Messina. Her name *Skýllē* is a feminine noun closely resembling the Hesychian gloss *skýllon · tèn kýna légousin* "*s.* they call the she-dog" and thus most likely meaning 'She-Dog' (Beekes 2010, s.v. σκύλαξ). This semantic interpretation is supported by passage [28] from the *Odyssey*, where Scylla is said to bark with the voice 'of a puppy' (*skýlakos*); further support comes from texts [29], [30], and [31] by later authors Anaxilas, Apollodorus and Hyginus, where Scylla is described as a canid-like being. The monster is even explicitly called *pontía kýōn* "sea she-dog" in [29], an epithet that exactly matches the phrase [CANID – of WATER] reconstructed on the basis of the Norse and Irish data discussed above. If Greek *póntos* 'sea' were not currently traced back to a PIE noun **pont-eH-* 'path' (see, e.g. Beekes 2010, s.v. πόντος), one may even take *póntos* 'sea' for another thematic derivative with *-o-* grade of the PIE root **pen-* 'humid', and correspondingly trace Greek *pontía kýōn* "sea she-dog" back to the same inherited collocation [CANID – of WATER (**pon-*(*t*/*i̯*)*o-*)] reconstructed above on the basis of the names of Scylla's Norse and Irish counterparts.

[28] **ἔνθα δ᾽ ἐνὶ Σκύλλη ναίει δεινὸν λελακυῖα. / τῆς ἦ τοι φωνὴ μὲν ὅση σκύλακος νεογιλῆς / γίγνεται**, αὐτὴ δ᾽ αὖτε πέλωρ κακόν· "**In it dwells Scylla, yelping terribly. Her voice to be sure is only as loud as the voice of a newborn whelp**, but she herself is an evil monster" (*Odyssey* 12.85–12.87)

[29] ἢ τρίκρανος **Σκύλλα, ποντία κύων** "O **Scylla** with three heads, **sea she-dog**" (Anaxilas *Neottis* K-A 22)

[30] ἦν δὲ ἐν μὲν θατέρῳ **Σκύλλα, Κραταιίδος θυγάτηρ καὶ †Τριήνου ἢ Φόρκου**, πρόσωπον ἔχουσα καὶ στέρνα γυναικός, **ἐκ λαγόνων** δὲ **κεφαλὰς ἓξ καὶ δώδεκα πόδας κυνῶν** "and in one of them was **Scylla, a daughter of Crataeis and Trienus or**

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and a water-dog serves the narrative function of exalting the protagonist as a holy man who is able to befriend dangerous and wild animals, just like Saint Francis is said to have befriended the Wolf of Gubbio (*Lupo d'Agobbio*) in Chapter 21 of the medieval Italian hagiographic text *Fioretti di San Francesco*.

Phorcus, with the face and breast of a woman, but **from the flanks she had six heads and twelve feet of dogs**" (Apollodorus *Epitome* 7.20)

[31] ***Ex Typhone*** *et Echidna*: […] ***Scylla*** *quae superiorem partem feminae,* ***inferiorem canis*** *habuit* "**From Typhon** and Echidna: **Skylla**, who had the upper part of a woman, **the lower one of a dog**" (Hyginus *Praefatio* 39)

As for the Hydra, a many-headed female monster famously slain by the hero Herakles, she is referred to as *tán* […] *kýna Lérnas* / *hýdran* "the she-hound of Lerna, the Hydra" in passage [32] and *tḗn* […] *kýna* / *hýdran* "the she-hound, the Hydra" in passage [33] below; both are from Euripides's *Herakles*, a tragedy in which this author clearly employs very archaic formulaic material (see Watkins 1995: 378–381; 493–495; and *passim*). Since Lerna was also a WATERY location – a complex of springs, a swamp or a lake (see the ancient sources cited in *Neue Pauly*, s.v. *Lerna*) – the epithet *kýna Lérnas* "she-hound of Lerna" may reflect the same traditional phrase [CANID – of WATER] that also underlies the Norse, Irish and Greek data discussed above, allowing for the identification of the Hydra as a further reflex of the IE monstrous WATER-CANID.[18]

[32] **τάν** τε μυριόκρανον / πολύφονον **κύνα Λέρνας / ὕδραν** ἐξεπύρωσεν "**The** myriad-headed murderous **she-hound of Lerna, the Hydra**, he destroyed by fire" (Euripides *Herakles* 419–421)

[33] **τήν** τ᾽ ἀμφίκρανον καὶ παλιμβλαστῆ **κύνα / ὕδραν** φονεύσας "I killed **the she-hound** whose many heads on all sides grow back again, **the Hydra**" (ibid. 1274–1275)

If the Hydra had originally been another WATER-CANID, she must have already been provided with serpentine features before the seventh century BCE, since by that time it may be safely assumed on the basis of both literary sources (the first being Peisander of Rhodes, mid-seventh century) and iconographic representations (the earliest being a Boeotian fibula from *c.* 700 BCE) that the monster was usually imagined as a serpentine being with many serpentine heads, perhaps after having been

[18] The parallel between Euripides's canid-like Hydra and the Norse Fenrir Wolf was already suggested en passant by McCone 1987: 125 (briefly resuming and expanding the treatment in McCone 1984: 23–26).

conflated with the monstrous adversary par excellence, the "Serpent of the Deep" discussed above (Section 1.2), or even by association with the noun *hýdros* 'water-snake'. This is not unconceivable, given that the other Norse, Celtic and Greek WATER-CANIDS discussed above are also represented as hybrid monsters whose appearance mixes features of both canid and other beings (also serpents, e.g. in the case of Fenrir, see Oehrl 2011: 165). As a reflex of the IE WATER-CANID, the Hydra would have originally been more similar to three of her siblings, who were born, like her, from Typhon and Echidna, namely: the two mythological dogs Kerberos (the hell-hound) and Orth(r)os (guardian of Geryon's herd),[19] as well as their sister (at least according to [31] above) Scylla, "the sea she-hound". Furthermore, an original canid-like form for the Hydra is also supported by her name's etymological parallels in other IE traditions: as long noted (see e.g. Nagy 1985–1986: 123), the Greek formation *Hýdr-ā* is similar (differing only in the gender) or even identical (same gender) to several terms for 'otter' in various IE traditions (including English *otter*), all of which are substantivized reflexes of the PIE adjective **udr-ó-* 'of water, aquatic', and several of which are even feminine, e.g. Latin *lutr-a* (with initial *l-* from *lavō* 'wash' or *lupus* 'wolf'; de Vaan 2008: 355) or German *Otter* from Proto-Germanic **utr-ō-* (see Kroonen 2013: 562). The latter feminine nouns may be transposed as PIE **udr-eh$_2$-*, exactly like Homeric Greek *Hýdr-ē*: since otters are so-called Caniformia (i.e. canid-like mammals) and, as seen above, are even called "water-dogs" in Celtic languages, this etymological connection supports an original canid-like (rather than serpent-like) shape for the Hydra.

If this were the case, just like Ancient Greek noun *hýdros* 'water-snake' was likely substantivized by accent-retraction from the adjective **hydrós* 'of water, aquatic' of a phrase **hydrós óphis* "aquatic serpent", the name *Hýdr-ā* 'Water-Female' may have been substantivized by accent-retraction from the adjective **hydrá* 'of water, aquatic' of an original phrase **hydrá kýōn* "aquatic she-hound", another Ancient Greek reflex of the inherited phrase [CANID – of WATER] used in several IE texts to refer to a monstrous being. The feminine gender would be relatively expected, since Greek *kýōn* 'dog (masculine or feminine)' is usually feminine when it refers to a 'hound (dog used for killing)' (*LSJ*, s.v.). Even though the formulaic phrase **hydrá kýōn* reconstructed above is obviously not attested in any Greek text, it may

[19] See McCone 1984: 25 for a previous intepretation of the Hydra as "an Otherworld hound-monster very much like Orthus and Cerberus".

underlie Euripides's passages [32] and [33] above, both of which peculiarly attest appositional phrases *tán/tḗn kýna hýdran* "the she-hound, the Hydra", which seem to intentionally evoke the same formulaic phrase **hydrá kýōn* "acquatic she-hound", of which Scylla's epithet *pontía kýōn* "sea she-hound" [29] may either be an innovative variant (if Greek *póntos* 'sea' is an innovation) or a more archaic one (if Greek *póntos* is related to Old Norse *fen* and Old Irish *on°*, see above). In any case, the assumption of such a formulaic phrase **hydrá kýōn*, although attractive in some respects, is not necessary to the reconstruction proposed here, namely that the Hydra may have been imagined as a monstrous "Water Canid", which is mainly grounded on the correspondence between Euripides's phraseology, the cognates for Hydra's name in other IE languages, and the canine nature of her siblings in Greek myth.

3.2. Monstrous horses from the waters

The evidence for the reconstruction of an IE monstrous WATER-CANID figure seems particularly compelling to the present author,[20] but cross-cultural comparison of the onomastics and phraseology associated with monstrous beasts from the waters in IE traditions also allows for the identification of at least one alternative variant of the WATER-BEAST: the monstrous WATER-HORSE.

A first specimen of this figure is attested within the Indic tradition, where the eschatological role of slayer of the gods and destroyer of the world is not ascribed to a WATER-CANID – as in the case of the Norse Wolf of the Fen – but to a WATER-HORSE: the Indic fire-monster called *Vāḍava-* '(the being) of the mare, of the she-horse', because it has the shape of a mare, and *Aurva-* '(the being) of the ocean-basin', because it inhabits the ocean. The myth of the Indic Ocean-Mare (on which see, e.g. Doniger O'Flaherty 1980: 213–217 and *passim*) closely resembles that of the Norse Wolf of the Fen: she is destined to destroy the universe and the gods (see [34] and compare Norse text [21]); therefore, the gods take her to the ocean and imprison her there (see [35] and compare Norse texts [21] and [22]); when the End of Time comes, the Ocean-Mare shall get free from her water-prison, slay the gods, and destroy the whole world (see [36] and compare Norse texts [23] and [24]).

[20] Davide Ermacora (pers. comm.) points out to me that *water-wolf* is further attested in English folklore as the name of a smaller monster, a parasite that can be swallowed by a man "when drinking out of a stream" and then, "it is said, lives and grows in his stomach" (Addy 1888: 276).

[34] *vaḍaveti smaran vipraḥ kṛtyāpi vaḍavākṛtiḥ / **sarvasattvavināśāya** prabhūtānalagarbhiṇī* "The demon that came out of his eyes had the shape and features of a mare. She contained within herself plenty of fire **for destroying all living beings**'" (*Brahma Purāṇa* 110.124c–110.125a)

[35] [*brahmovāca*] ***vaḍavāmukhe 'sya vasatiḥ samudre vai bhaviṣyati*** […] ***praviveśārṇavamukhaṃ** nikṣipya pitari prabhām* "[Brahma said:] **its dwelling shall be at the Mare's Mouth in the Ocean** […] **It entered the ocean's mouth** covering its father with splendor" (*Harivaṃśa* 1.45.58ab; 1.4.62; cf. *Matsya Purāṇa* 175.58ab–175.59; 175.62)

[36] *tato yugānte bhūtānām eṣa cāhaṃ ca suvrata / **sahitau vicariṣyāvo niṣprāṇanakarāv iha /** […] **dahanaḥ sarvabhūtānāṃ sadevāsurarakṣasām*** "When the End of Time comes and the hour of destruction of all creatures, **we will join forces to devour the worlds. […] It (the Ocean-Mare) will devour all beings, together with Gods, Asuras and Rakshasas**" (*Harivaṃśa* 1.45.60–1.45.61; cf. *Matsya Purāṇa* 175.60–175.61)

Besides sharing the same role in mythology and eschatology, the Indic Ocean-Mare and the Norse Wolf of the Fen have correspondences in their names as well. As anticipated above, one of the names of the Indic monster is Sanskrit *Vāḍava-* 'of the mare, of the she-horse', which is a derivative (*vr̥ddhi*-type) of the noun *vaḍavā-* 'mare, she-horse', a beast that was associated with voracity and danger in both Indic and other IE traditions (see Doniger O'Flaherty 1980: 196; 237), just like the wolf in the Norse one. The other prominent name of this monster is *Aurva-* 'of the ocean basin', which is a derivative – of the same *vr̥ddhi*-type – of the Vedic Sanskrit noun *ūrvá-* 'container, basin' (Doniger O'Flaherty 1980: 226), which in the *Rigveda* often means 'ocean basin', the 'container' par excellence where all rivers flow (see RV 2.13.7; 2.35.3; 3.30.19);[21] one may compare with this last detail the image of Fenrir lying, gaping, at the mouth of a river (see [22] above). Sanskrit *Aurva-* 'of the ocean basin' is thus a close Indic counterpart to the Old Norse name of the wolf *Fenrir* 'of the water basin, swamp, fen', allowing for the identification of both these characters as reflexes of an IE WATER-BEAST that was

[21] See Grassmann 1873–1875, s.v.; Doniger O'Flaherty 1980: 226; Jamison and Brereton 2014, ad RV 2.13. The etymology of *ūrvá-* is uncertain (*EWAia*, s.v.).

imprisoned in a watery location and destined to destroy the universe at the End of Time.

However, a folkloric parallel for the Indic Ocean-Mare in texts from medieval Ireland allows for the assumption that the WATER-HORSE was not an Indic innovation that departed from the more usual WATER-CANID but rather a variant WATER-BEAST of IE heritage. Just like the Norse WATER-CANID Fenrir Wolf has a geographically distant but mythologically close parallel in the Indic Ocean-Mare, the Irish monstrous WATER-CANID Onchú or Dobarchú has a (geographically very close) variant in an equine monster living in lakes that is called *Each uisce* "Horse of water" (Williams 1989: 75), a name that is already attested in Old Irish as *ech usci*, see text [37] from the *Triads of Ireland*.

> [37] […] *Míl Leittreach Dalláin, cenn duine fair, dénam builc gobann olchena* ***.i. ech usci robói isind loch*** *i tóeb na cille, is hé dochúaid ar ingin in tsacairt co ndergene in míl frie*
> "The Beast of Lettir Dallan. It has a human head and otherwise the shape of a smith's bellows. **The water-horse which lived in the lake** by the side of the church cohabited with the daughter of the priest and begot the beast upon her." (*Triads of Ireland* 236)

This parallel is particularly significant on two levels. On the one hand, Old Irish *ech usci* and Irish *each uisce* 'horse of water' quite closely match the two Sanskrit names of the Indic Ocean-Mare *Vāḍava-* 'of the mare' and *Aurva-* 'of the ocean basin', and may thus allow for the reconstruction of a phrase [HORSE – of WATER] as the name of a monstrous beast within IE poetic-mythological culture. On the other hand, the Irish legendary beasts, the Water-Dog and the Water-Horse, attest to the coexistence of both a monstrous WATER-CANID and a monstrous WATER-HORSE within a single IE tradition, a synchronic variation which matches the crosslinguistic variation observed for the eschatological WATER-BEAST in Norse (WATER-CANID) and Indic (WATER-HORSE). Rather than assuming that one eschatological monster was older than the other, these correspondences may allow us to reconstruct both the WATER-CANID and the WATER-HORSE as two synchronic variants within early IE tradition of the same mythological WATER-BEAST, a murderous and voracious monster that was destined to destroy the world at the End of Time.

Before moving on to the next section, a consideration is in order. In contrast with SERPENTS, who (as shown above) were PERIPHERAL beings

even without any association to WATER, both CANIDS and HORSES had already been domesticated in IE prehistory (Anthony 2007: *passim*) and were thus effectively considered part of the IN-GROUP of a HUMAN HOUSEHOLD. Thus, the specification of these monstrous CANIDS and HORSES as WATER-creatures most likely expresses their status as WILD and UNDOMESTICATED animals who come from the PERIPHERY of the HUMAN world, WATER, and thus has the function to distinguish them from normal, non-WATER-linked domesticated dogs and horses, who belong in the HUMAN HOUSEHOLD. In other words, it may be proposed that, within IE culture, to associate an otherwise domestic animal with WATER, to call it [BEAST (CANID, HORSE) – of WATER], was a way to describe it as a WILD BEAST, a PERIPHERAL animal that may become dangerous if it reaches the HUMAN HOUSEHOLD, just like (aquatic or non-aquatic) SERPENTS.

3.3. Humanoid beings from the waters

In the previous two sections, several IE examples of WATER-BEASTS have been discussed; as is well known, however, numerous mythological beings associated with WATER are not animal-shaped but have rather humanoid features. Since a great number of humanoid sea deities and water deities are attested in IE mythology, for reasons of both space and relevance the present discussion is only limited to a small selection of WATER-linked HUMANOID figures, who are explicitly set in opposition to the gods in three distinct IE traditions: the dangerous Greek monster Typhon, the ambivalent Irish Fomoiri and the friendly Norse sea-giant Ægir.

The first character discussed in this section is an utterly hostile one: Typhon, a monstrous being (offspring of the gods Earth and Tartarus or of the goddess Hera alone) who in both iconographic sources and later texts is represented as a creature of hybrid – half-humanoid and half-serpent – shape (see [38]), just like the Norse Fenrir, the Irish Water-Dog, and the Greek Scylla. The latter monster and the Hydra are also both said to be Typhon's daughters, for example in text [31] above: Typhon is thus associated with WATER-BEASTS from a genealogical perspective. It is thus particularly noteworthy that this character's role within Greek mythology is quite similar to those of the Norse Wolf of the Fen and the Indic Ocean-Mare in their respective traditions: Typhon threatens to conquer the gods and is thus fought off by Zeus (see [39]), who manages to imprison him in a location "by the narrows of the sea", Mount Etna, from which, someday, he shall get free and destroy the land of Sicily (see [40]).

[38] μεμιγμένην ἔχοντα φύσιν **ἀνδρὸς καὶ θηρίου.** […] ἦν δὲ αὐτῷ τὰ μὲν ἄχρι μηρῶν ἄπλετον μέγεθος **ἀνδρόμορφον**, […] τὰ δὲ ἀπὸ μηρῶν **σπείρας** εἶχεν ὑπερμεγέθεις **ἐχιδνῶν** "[**Typhon** was] a hybrid between **man and beast.** […] As far as the thighs he was **of human shape** […] From the thighs downward he had huge **coils of vipers**" (Apollodorus 6)

[39] **καί νύ κεν ἔπλετο ἔργον ἀμήχανον ἠματι κείνῳ, / καί κεν ὅ γε θνητοῖσι καὶ ἀθανάτοισιν ἄναξεν**, / εἰ μὴ ἄρ' ὀξὺ νόησε πατὴρ ἀνδρῶν τε θεῶν τε "**And on that very day an intractable deed would have been accomplished, and he would have ruled over mortals and immortals,** if the father of men and of gods had not taken sharp notice" (Hesiod *Theogony* 836–838)

[40] καὶ νῦν ἀχρεῖον καὶ παράορον δέμας / **κεῖται στενωποῦ πλησίον θαλασσίου** / ἰπούμενος ῥίζαισιν Αἰτναίαις ὕπο· / κορυφαῖς δ' ἐν ἄκραις ἥμενος μυδροκτυπεῖ / Ἥφαιστος, **ἔνθεν ἐκραγήσονταί ποτε / ποταμοὶ πυρὸς δάπτοντες ἀγρίαις γνάθοις / τῆς καλλικάρπου Σικελίας λευροὺς γύας· / τοιόνδε Τυφῶς ἐξαναζέσει χόλον /** θερμοῖς ἀπλάτου βέλεσι πυρπνόου ζάλης, / καίπερ κεραυνῷ Ζηνὸς ἠνθρακωμένος "And now **he lies**, a sprawled, inert body, **near the narrows of the sea**, crushed under the roots of Mount Etna; on its topmost peaks Hephaestus sits forging red-hot iron, **and from thence one day will burst forth rivers of fire, devouring with their savage jaws the smooth fields of Sicily with their fine crops. Such is the rage in which Typhos will boil over**, raining hot darts of fiery breath that no one can touch, even though he has been calcinated by the thunderbolt of Zeus" (Aeschylus *Prometheus Bound* 363–372)

The parallels between Typhon and the IE WATER-BEASTS discussed above, however, are not only mythological in character; they involve onomastics as well. The name *Typháōn* and its several variants (e.g. *Typhōeús*) have been analysed as reflexes of the PIE root **dʰeu̯bʰ*- 'deep' by Watkins (1995: 461–462),[22] who compared Typhon to the Indic and Greek "Serpents of the Deep" mentioned above, but did not get into the details of the derivational history and semantic interpretations of

[22] Watkins (ibid.) justifies the attested alternation between long and short *u* as "expressive lengthening".

these formations. At least for the variant *Typháōn*, one may assume that it is the reflex of **Typhā́-wōn* '(being) associated with depth', a *-won-* onomastic derivative of an abstract noun **typh-ā́-* 'depth', of the well-attested derivational type of Homeric Greek *Aretā́-(w)ōn* (*Iliad* 6.31) from *aret-ḗ* (earlier **aret-ā́-*) 'excellence'.[23] The derivational base of Typhon's name, Greek **typh-ā́-* 'depth' (PIE **dʰubʰ-éh₂-*), would then be a cognate of the Proto-Celtic formation **dub-ro-* 'water' (PIE **dʰubʰ-ró-* 'deep, dark, dirty') reflected by the first element of the name of the Irish monster *Dobar-chu* 'water-dog', both being reflexes of PIE **dʰeu̯bʰ-* 'deep'. Given the etymological connection with the Irish Water-Dog, and given that Typhon, just like the Norse Wolf of the Fen and the Indic Ocean-Mare, is said to lie in a WATERY location in [40], it is conceivable that the lexeme **typh-ā́-* 'depth' associated with this character referred precisely to WATERY DEPTHS, and that *Typháōn* (**Typhā́-wōn*) should be interpreted as '(monster) associated with watery depths', another reflex of the structure [BEAST (CANID, HORSE, HUMANOID) – of WATER] that underlies several names of monsters in IE traditions, as shown above. Both thematic and onomastic parallels thus allow for the analysis of Typhon as another Greek "Monster from the Waters" – just like his daughters Scylla and the Hydra – but also as a humanoid reflex of the same IE character attested by the Norse Wolf and the Indic Mare: an eschatological WATER-BEAST (variously conceptualized as either a CANID, a HORSE or a HUMANOID being) associated with the destruction of the world. At some point, this character may also have been conflated with a Greek reflex of the "Serpent of the Deep", if Watkins (1995: 462) was right in assuming that Typhon is another reflex of his mythological Dragon.

As is well known, however, within IE mythology, relationships with WATER-linked beings must not always be on violent terms: especially when these beings are HUMANOID, it is at least possible to have social relations with them, as shown by the following two examples (among many others). A first example is found in mythological texts from medieval Ireland, such as passage [41] from the *Cath Mag Tuired*, where the gods are said to battle a race of supernatural humanoid beings called *Fo-moire*, a name that already in the Middle Ages was interpreted (among other things, see the discussion in Rodway 2010: 16–17) as '(those who live or come from) under (*fo*) the sea (*muir*)', matching the fact that these

[23] See Ginevra 2024a: 188–189; on this onomastic formation and type, see Massetti 2013–2014: 142.

beings are indeed associated with the SEA in Old Irish texts.[24] As noted by Mark Williams (2016: 94), in later texts the Fomoiri "became the monsters *par excellence* of Irish tradition – variously deformed, fishlike, or fanged – but in several early sagas […] they look much the same as the god-peoples and can be just as beautiful", as seen in [42]; before entering a war with the gods, the Fomoiri were actually their close allies, to the point of mixed unions between the two, as shown in [43].

[41] *Ní tánic doqum n-Érenn drem bud mó* ***gráin nó adhúath indá in slóg-sin na Fomoiridhi*** "No host ever came to Ireland which was more **terrifying or dreadful than that host of the Fomoiri**" (*Cath Mag Tuired* 51)

[42] *Co n-acqu íarum pa duine ba* ***ferr delph. Mogg órbuide foir goa díb gúaillib*** "Then she saw that it was a man of **fairest appearance. He had golden-yellow hair down to his shoulders**" (*Cath Mag Tuired* 16)

[43] ***Gnísit íarum Túadh Dé caratrad fri Fomorib*** *& debert Balar úa Néit a ingin .i. Ethne, de Cén mac Díen Cécht. Gonad í-side ruc a ngen mbúadha .i. Lucc* "**The Túatha Dé then made an alliance with the Fomoiri,** and Balor the grandson of Nét gave his daughter Ethne to Cían the son of Dían Cécht. And she bore the glorious child, Lug" (*Cath Mag Tuired* 8)

A second prominent example of FRIENDLY, GUEST-LIKE character closely associated with a WATERY location is attested in Old Norse texts from medieval Scandinavia such as [44], in which the gods are said to be in a guest–host relationship with a 'giant' (*jǫtunn*) called *Ægir* (Jackson 2014: 98–99), a ruler of the ocean. Ægir's name is used in Norse poetics as a synonym of *sær* 'sea', as attested in passage [45], where the latter is called both "visitor to the gods" and "father of Ægir's daughters", and thus clearly identified with Ægir.[25] Correspondingly, Old Norse *Ægir* has long been analysed (Darms 1978: 25–33) as a reflex of Proto-Germanic **ēg-ija-* and PIE **h_2ēk^w-i̯ó-* 'of water, pertaining to water, aquatic', a *vr̥ddhi* derivative of the PIE term **$h_2$ek^w-eh_2-* 'water' reflected, for example, by Latin *aqu-a*, Gothic *ah-a*.

[24] See Rodway 2010: 17 fn. 72 and *passim* for more details on the association of the Fomoiri and their mythic ancestors with the sea.

[25] Cf. also poetic periphrases such as *Ægis grund* "Ægir's field" for SEA and *Ægis dœtr* "daughters of Ægir" for WAVES (Meissner 1921: 92; 98).

[44] ***Ægir sótti heimboð til Ásgarðs,*** *en er hann var búinn til heimferðar þá* ***bauð hann til sín Óðni ok ǫllum Ásum*** *á þriggja mánaða fresti* "**Ægir went as a guest to Asgard,** and when he was about to return home, **he invited Odin and all the gods to visit him** after an interval of three months" (Snorri Sturluson, *Skáldskaparmál* 33)

[45] *Hvernig skal* ***sæ*** *kenna? Svá at kalla hann Ymis blóð,* ***heimsœkir guðanna,*** *verr <R>ánar,* ***faðir Ægis dœtra*** "How shall **sea** be referred to? By calling it Ymir's blood, **visitor to the gods**, husband of Ran, **father of Ægir's daughters**" (*Skáldskaparmál* 25)

These last two examples, the Irish case of the Fomoiri and the Norse case of Ægir, make it clear that, within IE mythology and religion, it was possible to establish FRIENDLY relationships with WATER-linked beings, especially if HUMANOID. Nonetheless, the latter were still regarded as STRANGERS, i.e. as OUTSIDERS from an OUT-GROUP with whom one may entertain either GUEST-LIKE (as for Ægir) or HOSTILE relations (as in the case of the Fomoiri).

3.4. To sum up: hostile and friendly others from the waters

Partial results of the research presented so far may be summarized as follows. On the one hand, SERPENTS were not the only WATER-linked HOSTILE creatures in IE mythology: both linguistic and thematic parallels support the reconstruction of IE monstrous WATER-CANIDS, WATER-HORSES and even WATER-HUMANOIDS, as well as of an IE eschatological myth about a monstrous (animal or humanoid) WATER-BEAST linked with world-destruction. On the other hand, it is clear that within early IE mythology and religion, just like it was possible to have FRIENDLY relationships with SERPENTS, it was also possible to establish FRIENDLY relationships with WATER-linked HUMANOID characters: both SERPENTS and WATER-beings were simply conceptualized as essentially PERIPHERAL creatures, natural OTHERS with whom one may entertain either HOSTILE or FRIENDLY relations, as members of an ontological OUT-GROUP opposed to the IN-GROUP of the HUMAN HOUSEHOLD (together with its patrons and mythological proxies, the GODS). In contrast, WATER-CANIDS and WATER-HORSES are usually characterized as dangerous WILD BEASTS in opposition to normal, non-aquatic CANIDS and HORSES, domesticated animals that were considered members of the HUMAN HOUSEHOLD: this

opposition makes it clear that the WATERY specification of these legendary CANIDS and HORSES has precisely the function to signal their status as WILD BEASTS: the phrases [CANID – of WATER] and [HORSE – of WATER] refer to WILD BEASTS precisely in opposition to simple DOGS and HORSES, which are DOMESTIC ANIMALS. This system of associations is summarized in Table 3.

Table 3. Associations between WILD BEAST, WATER, PERIPHERY and OUT-GROUP.

SERPENT, WILD BEAST	OTHER THAN	HUMAN, DOMESTIC ANIMALS
(DEEP) WATER		
PERIPHERY, THERE	OPPOSED TO	CENTRE, HERE
OUT-GROUP, OTHERS	HOSTILE OR FRIENDLY TOWARDS	IN-GROUP, HOUSEHOLD

4. Earth and water: a coherent system of spatial associations

The IE comparanda discussed in the previous sections allow for the reconstruction of a more or less coherent system of associations, according to which SERPENTS and WATER-linked creatures are associated with spatial PERIPHERY – they are said to "come from somewhere else" (from a deictic THERE opposed to HERE) – and social OTHERNESS – they are described as (either HOSTILE or FRIENDLY) members of an OUT-GROUP (opposed to our own IN-GROUP). It is first necessary to briefly review some idealized conceptualizations of HUMAN LIFE attested in IE traditions (Section 4.1), in order to understand how this conceptual system came to be developed (Section 4.2).

4.1. Idealized conceptualizations of human life as 'being on land, here, with your in-group' in early IE traditions

First, as is well known, within early IE traditions, HUMAN LIFE was ideally linked to the location EARTH and closely associated with the possibility of "standing up" or "walking on the earth, on land" (see, e.g., West 2007: 125; Ginevra 2020a: 112–113). This association is nicely exemplified, for example, by two features of Homeric Greek poetic phraseology, namely the use of the adjective *epi-chthónios* '(that is) on earth' as a traditional epithet of HUMAN BEINGS (see [46]) and the formulaic verse *athanátōn te theôn chamaì erchoménōn t' anthrṓpōn* "of immortal gods and of men who walk upon the earth" (see [47]), in which WALKING ON EARTH

is just as characteristic for HUMAN BEINGS as IMMORTALITY is for GODS. This situation finds an exact parallel in, for example, Old Norse poetic phraseology, where *manna þeira er mold troða* "of those men who tread upon the earth" is used to simply refer to all living MEN (see [48]) and *moldveg sporna* "to kick on the earth (for the first time)" actually means TO BE BORN (see [49]). The association of HUMAN LIFE with WALKING ON EARTH was so prominent in early IE traditions that it even left reflexes in the lexicon of Lithuanian, which has a term for 'man', *žmo-gùs*, that etymologically reflects a compound 'earth-walker' (*ALEW*, s.v.), and of various Germanic languages, which attest reflexes of a Proto-Germanic term **kwikwa-* for 'alive' (e.g. English *quick*), which has been convincingly analysed by Daniel Kölligan (2020) as the reflex of a PIE formation **g*^{w}*ig*^{w}*h*$_2$*ó-* meaning 'walking, moving'.

[46] ῞Ιδεώ θ᾽, ὃς κάρτιστος **ἐπιχθονίων** γένετ᾽ **ἀνδρῶν / τῶν τότε** "of Idas, who was mightiest **of men who were then on the face of earth**" (*Iliad* 9.558–9.559)

[47] ἀθανάτων τε θεῶν **χαμαὶ ἐρχομένων** τ᾽ **ἀνθρώπων** "(the race) of immortal gods and that **of men who walk upon the earth**" (*Iliad* 5.442)

[48] ***manna þeira / er mold troða /*** *þic qveð ec óblauðastan alinn* "**Of those men who tread upon the earth** I declare you've been raised the least cowardly" (*Fáfnismál* 23.4–23.6)

[49] *Knátti **mær** oc **mǫgr / moldveg sporna*** 'A **girl** and a **boy** were able **to kick on the earth** [= **they were born**]' (*Oddrúnargrátr* 8.1–8.2)

Second, a further well-known, most likely universal, conceptual association attested in a number of IE traditions is that between HUMAN LIFE and BEING HERE, still frequent in English (e.g. *she left us*, meaning "she died", *he is still with us*, meaning "he is still alive"; see Lakoff and Turner 1989: 1 and *passim*) and various modern IE languages (e.g. Italian *è scomparso* "he disappeared", meaning "he died"). This association underlies, for example, the Ancient Greek passages [50] and [51] below, where loved ones are said to be "taken away" when they die, as well as Sanskrit text [52] and Old Norse text [53], where the act of dying is conceptualized as going away to the palace of the death-deity.

[50] τίς λίθος οὐκ ἐγόησεν, ὅτ᾽ **ἐξήρπαξεν ἐκείνην** / εὐρυβίης **Ἀΐδης ἀνδρὸς ἀπ᾽ ἀγκαλίδων** "What stone did not mourn when

mighty **Hades seized her away from her husband's arms (i.e. she died)**?" (*Anthologia Palatina* 7.599.5–7.599.6)

[51] ᾽Ηριννα, Μουσῶν ἄνθεα δρεπτομέναν, / ᾽**Ἀδας εἰς ὑμέναιον ἀνάρπασεν** "As Erinna was gathering the flowers of the Muses, **Hades carried her off to wed her [i.e. she died]**" (*Anthologia Palatina* 7.13.2–7.13.3)

[52] *bhīmaḥ saptaśatān **vīrān anayad yamasādanam*** "And Bhima then **led** seven hundred **heroes to the abode of Yama (the death-god; i.e. he killed them)**" (*Mahābhārata* 6.50.73)

[53] ***sendoð systr Helio**, / slícs ec mest kennomc* "**you sent** my **sister off to Hel (the death-goddess; i.e. you killed her)**, that upsets me most" (*Atlamál* 56.9–56.10)

A third and last conceptual association that is relevant here is the connection between the idealized concept of HUMAN LIFE and the condition of BEING IN THE COMPANY OF YOUR IN-GROUP. This (likely also universal) association is attested, for example, in a number of passages from various IE traditions (on which see more specifically Ginevra 2020b: 121 and *passim*) in which the dissolution of the bonds of kinship (the IN-GROUP par excellence) is used to describe either the worst possible location that one can reach – the Realm of the Dead – as in Hittite text [54], or a dystopic future taking place right before the End of Time, when human society will stop functioning correctly, as in Greek text [55], Old Norse text [56] (taking place right before the Midgard Serpent and Fenrir destroy the world together) and Old Irish passage [57].

[54] *annanekē*[š UL *kan*]*ēššanzi **pappa**-*ŠE[Š^{MEŠ} ***UL kan**]**ēššanzi** **annaš**=*za* **DUMU**-***a**[***n UL k**]**anēšzi*** [**DUMU**-***aš**=*za*] **AMA**-***a**[***n UL k**]**anēšzi*** "Sisters having the same mother do [**not**] recognize (each other). **Brothers having the same father** do [**not**] **recognize** (each other). **A mother** does [**not**] **recognize** [her] own **child**. [A **child**] does [**not**] **recognize** [its own] **mother**" (KBo 22.178 ii 3–7 + KUB 48.109 ii 4–8; Hoffner 1998: 34)

[55] **οὐδὲ πατὴρ παίδεσσιν ὁμοίιος** οὐδέ τι παῖδες, / […] / **οὐδὲ κασίγνητος φίλος** ἔσσεται, ὡς τὸ πάρος περ "**Father** will **not** be **like-minded with sons**, nor the sons (with their father), […] **nor** will **the brother** be **dear** (**to his own brother**), as he once was" (Hesiod *Works and Days* 182–184)

[56] ***Brœðr muno beriaz*** / *oc* ***at bǫnom verðaz*** / *muno* ***systrungar*** / ***sifiom spilla*** "**brothers will fight** and **kill each other, sisters' children** will **defile kinship**" (*Vǫluspá* 45)

[57] ***Foglaid cech mac.*** *Ragaid mac i lligie a athar. Ragaid athair a lligi a meic.* […] ***immera mac a athair*** "**Every son an enemy** [**of his father**]. The son will go to the bed of his father, the father will go to the bed of his son. […] **Son will betray his father"** (*Cath Mag Tuired* 838–840)

The three conceptual associations discussed above[26] are systematically attested in several IE (and most likely also non-IE) traditions and thus allow for the reconstruction of an ancient conception of human ecology that may be summarized as in Table 4: HUMAN LIFE is supposed to be based on EARTH/LAND, it marks the conceptual CENTRE and deictic HERE par excellence, and it is supposed to be experienced together with ONE'S OWN IN-GROUP/HOUSEHOLD.

Table 4. Associations between HUMAN LIFE, EARTH/LAND, HERE and IN-GROUP.

HUMANS
EARTH, LAND
CENTRE, HERE
IN-GROUP, HOUSEHOLD

4.2. The CENTRE–PERIPHERY spatial schema and its associations

In order to better understand this system of associations, a discussion of the CENTRE–PERIPHERY spatial schema in language and cognition is in order. As first formulated within the framework of cognitive linguistics by Mark Johnson (1987: 29), human thought and (correspondingly) language make use of a limited number of fundamental spatial schemas ("embodied image schemata" in Johnson's terminology): these are "recurrent pattern[s], shape[s], and regularit[ies] in, or of, [our] ongoing ordering activities", which "emerge as meaningful structures for us chiefly at the level of our bodily movements through space, our manipulation of objects, and our perceptual interactions". Perhaps the

[26] For an extensive discussion of these conceptualizations in IE from a historical-comparative and cognitive linguistic perspective, see Ginevra 2024b.

most basic of such meaningful structures is the CENTRE–PERIPHERY spatial schema, which may be described as follows:

> Our world radiates out from *our bodies* as perceptual centers from which we see, hear, touch, taste, and smell our world. […] At a certain distance from this perceptual center our world "fades off" into a perceptual horizon which no longer presents us with discrete objects. […] [T]he schema is a recurrent structure in my *experiential space*. […] [S]ome things, events, and persons […] are more central to my interactions. Others are relatively peripheral at a given point in time. One's spouse, lover, or friend are more central forces in my interactional world. […] [The CENTER–PERIPHERY schema] shows itself not only in the structure of my perceptual field but equally important as a structure of my social, economic, political, religious, and philosophical world. (Johnson 1987: 124–125; original emphasis)

As is obvious, within our perceptual and interactional experience of the world, the CENTRE–PERIPHERY schema almost never occurs by itself but it is rather experienced together with several other spatial schemas that "are superimposed upon it to define my orientation toward my world" (Johnson 1987: 125): among others, Johnson mentions NEAR–FAR, INNER–OUTER, SUBJECT–OBJECT, SELF–OTHER and MINE–THINE. The superimposition upon the CENTRE–PERIPHERY schema of the NEAR–FAR schema or the SELF–OTHER one clearly parallels the IE conceptual associations of (idealized) HUMAN LIFE with spatial concepts like CENTRE and HERE (opposed to PERIPHERY and THERE) and with the social concept of IN-GROUP (opposed to OUT-GROUP), as discussed above and summarized in Table 4. This entails that this IE system of conceptual associations of HUMAN LIFE may rather be represented in terms of a CENTRE–PERIPHERY schema, as in Figure 1: the items HUMANS, DOMESTIC ANIMALS, EARTH/LAND, HERE and IN-GROUP/HOUSEHOLD may be described as the CENTRE of the perceptual and interactional experience of the speakers of the earliest IE varieties. The next and final part of this contribution correspondingly explores what the PERIPHERY that surrounded this CENTRE should have looked like.

4.3. The periphery of human ecology in Indo-European: there, where water, serpents, wild beasts and others are

The ecological conception of HUMAN LIFE as an experience based on EARTH/LAND and its connection to the CENTRE–PERIPHERY spatial schema are key to understanding the reason why WATER was associated

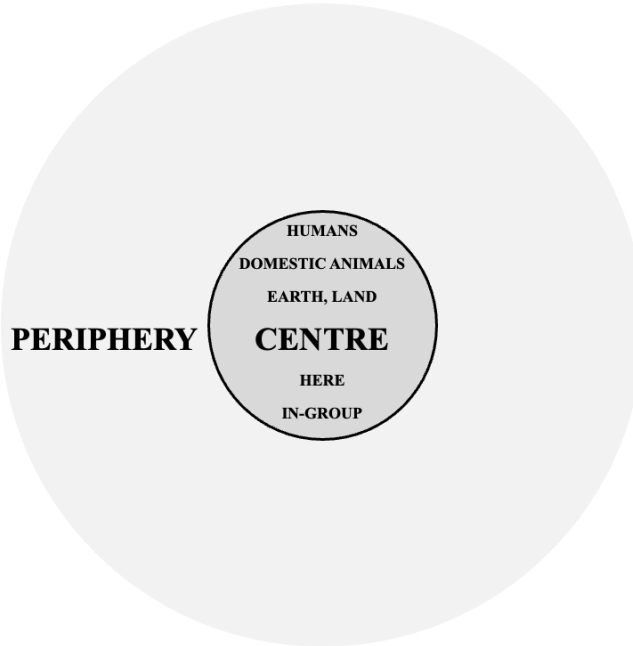

Figure 1. IE conceptions of HUMAN LIFE and the CENTRE–PERIPHERY spatial schema. Graphics: Riccardo Ginevra © License: CC BY-NC.

with PERIPHERAL beings in IE mythology, but also to evaluating if EARTH may have been surrounded by WATER in IE cosmology.

Within IE poetics (details in Ginevra 2019), [EARTH and WATER] was a merism, i.e. a polar formulaic phrase comprising two elements that together referred to a hyperonymic concept, i.e. LOWER WORLD-HALF under the SKY (conceptualized as the UPPER WORLD-HALF).[27] As polar expressions, merisms are obviously made up of two opposite poles: the merism [EARTH and WATER] for LOWER WORLD-HALF thus also attests to an opposition of the concepts EARTH vs. WATER, as two distinct SECTIONS OF THE LOWER WORLD-HALF under the sky (a "humid section" and a "dry section": cf. e.g. Latin *terr-a* 'earth, land' from **ters-ā-* 'dry [section of the lower-world half]'), as schematically shown in Table 5.

[27] See e.g. […] **οὐδὲ θάλασσα / οὔθ᾽ ὕδωρ ποταμῶν οὔτ᾽ ἄγκεα ποιήεντα** / ἵππων ἀθανάτων **οὔτ᾽ ἄκριες** ἔσχεθον ὁρμήν, / ἀλλ᾽ **ὑπὲρ αὐτάων** βαθὺν ἠέρα τέμνον ἰόντες **"Neither sea nor the rivers' water nor grassy glens nor mountain peaks** stayed the immortal steeds' impetus, but they passed **over them [i.e. over the lower world-half]** cleaving the deep air **[i.e. flying in the sky]"** (*Homeric Hymn to Demeter* 380–383).

Table 5. EARTH and WATER in IE poetics.

UPPER WORLD-HALF	SKY	
LOWER WORLD-HALF	WATER (HUMID SECTION)	EARTH, LAND (DRY SECTION)

Since EARTH was regarded as the CENTRE of HUMAN LIFE in IE ecological thought, the domain of what is PERIPHERAL to HUMAN LIFE would have logically been identified with WATER, the opposite pole of the LOWER WORLD-HALF; the UPPER WORLD-HALF, the SKY, was already occupied, as the exclusive seat of the GODS (the PIE term **deiu̯-ó-* 'god' originally meant 'heavenly'), who, in any case, were closely related to the HUMAN HOUSEHOLD (as its patrons) and often (but not always) functioned as mythological proxies of HUMAN BEINGS in religion. In other words, the cosmological opposition between EARTH and WATER straightforwardly prompted the following analogical proportion:

EARTH : HUMAN = WATER : X, HENCE X = NON-HUMAN

This line of reasoning allowed WATER to be conceptualized as the natural ecological niche of the quintessential NON-HUMAN creatures: supernatural SERPENTS as the ultimate ontological OTHERS, but also dangerous WILD BEASTS in opposition to pacific DOMESTIC ANIMALS (who, by definition, live together with HUMAN BEINGS on LAND), as well as HUMANOID OTHERS with either FRIENDLY or HOSTILE intentions.

Correspondingly, by means of the system of associations described above, WATER also came to be associated with the deictic THERE (opposed to the HERE of HUMAN LIFE) par excellence, i.e. the place where all dead people go when they are "not here anymore": as long noted, within several IE traditions "the boundary between the worlds of the living and the dead was marked by a stream or a body of water, as frontiers between peoples often are in the upper world" (West 2007: 389).

The final sentence of the quotation also anticipates the last relevant opposition, the one between OUT-GROUP and IN-GROUP: LAND being where one's own HOUSEHOLD thrives, WATER easily came to be conceptualized as the periphery from where OTHERS approach – either with hostile intentions (like the Irish Fomoiri) or friendly ones (like Ægir) – in order to reach the HOUSEHOLD, as well as the place where these OTHERS are supposed to go back to once their business with the HOUSEHOLD is over.

The relatively well-attested system of conceptual associations and oppositions described in this contribution is summarized in Table 6.

Table 6. The complete system of associations discussed in this contribution.

IE ecology	PERIPHERY	surrounding	CENTRE
Creature	SERPENTS, WILD BEASTS	different from	HUMANS, DOMESTIC ANIMALS
Location	(DEEP) WATER	separated from	EARTH, LAND
Deixis	THERE	distant from	HERE
Society	OUT-GROUP, OTHERS	hostile or friendly towards	IN-GROUP, HOUSEHOLD

A complex system of ecological associations arising by analogical processes thus underlies IE mythological conceptions such as those of the "Serpent of the Deep" and of the other "Beasts from the Waters". Of course, the development of such mythical figures must have been influenced by other factors as well, for example the observation of the natural fact that some dangerous SERPENTS and WILD BEASTS really do live in WATERY environments, but this trivial detail by itself is not enough to account for the cultural prominence of these mythological figures within IE traditions. The Serpent of the Deep was clearly the most PERIPHERAL creature imaginable within IE mythology, as SERPENTS were already quintessential PERIPHERAL beings for speakers of IE, even without any association to WATER.

From a cosmological perspective, these results may also provide us with a tentative answer to the question of whether the earliest speakers of IE conceived of EARTH as surrounded by WATER. Since EARTH was ideally conceptualized as the CENTRE of HUMAN experience, whereas WATER was associated with its PERIPHERY, and since any PERIPHERY is obviously imagined as surrounding its CENTRE according to the universal spatial schema, the cosmological belief that WATER surrounds the EARTH would have nicely fitted into the ecological system described in this contribution, as shown in Figure 2. This ecological and cosmological view of EARTH as a CENTRE that is surrounded by WATER as its PERIPHERY may have easily been combined with the mythological theme of the "Serpent of the (Watery) Deep", the most PERIPHERAL creature imaginable by the earliest speakers of IE (as both a SERPENT and a WATER-BEAST). The result of this conceptual

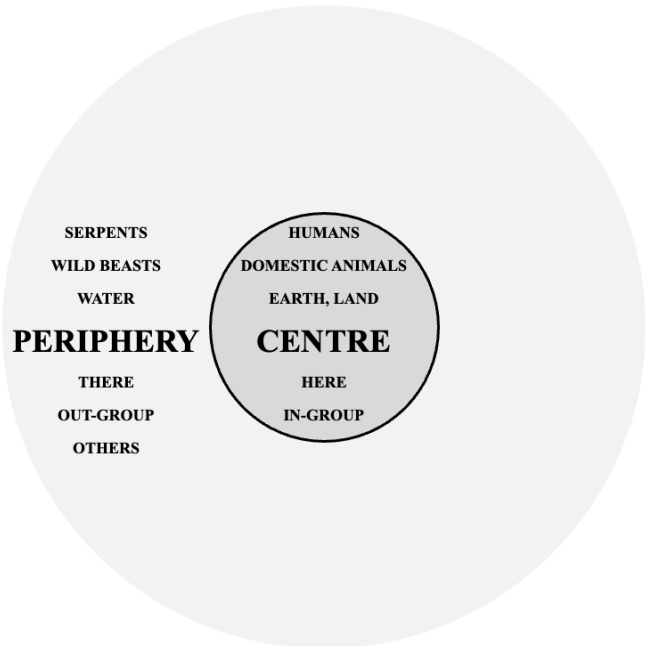

Figure 2. IE conceptions of human ecology and CENTRE–PERIPHERY spatial schema. Graphics: Riccardo Ginevra © License: CC BY-NC.

blend was the – likely inherited – belief attested within the Indic and Norse traditions according to which, even if you dare leave behind the land where your household and domestic animals are, and you attempt to travel far away through watery borderlands inhabited by serpents, wild beasts, and other strangers, you shall never reach beyond the gigantic serpent that lies in the deepest water and encircles all earth with its unending coils.

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3. Cattle, cosmology and sacrifice
An Indo-European interpretation of burnt mounds

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Abstract

One particularly enigmatic feature in Scandinavian archaeology is the burnt mounds (also called "heaps of fire-cracked stones"), typical for the Late Bronze Age of eastern Middle Sweden but with a much wider chronological and geographical spread. These structures have for a long time – without much discussion – been interpreted as piles of waste from ordinary settlements. In recent decades, with more and more sites being documented and analysed, the image of a much more complex background has emerged. This is most evident in the case of burnt mounds with complex construction details, sometimes visible on the exterior but more commonly in the form of internal stone structures, such as spirals and concentric circles. In addition, investigations of such mounds often uncover both varied and enigmatic finds. In particular, the depositional patterns of animal bones, cattle being the most common species, is a good starting point for an interpretation as ritual places, probably sacrificial sites. In addition, these mounds are often documented on archaeological sites with an overall ritual design and function. Based on the mounds' construction and the find material, it is possible to see clear connections to rituals that correspond with a basic cosmology, known from different Indo-European cultural traditions. There are therefore reasons to seek the origin of these cosmological beliefs as well as the ritual expressions they have received, in a common Proto-Indo-European stage. This applies to the connection to cattle and to beliefs about the basic elements of life and their affiliation with the creation myth, and how this has been expressed in the sacrificial ritual.

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The Indo-European sacrificial altar of the north

Animal husbandry and a nomadic lifestyle are strongly associated with early Indo-European culture. Today's dominant theory is that the nomads' early spread over Eurasia went hand in hand with a strong mobile pastoral economy (e.g. Anthony 2007; Kristiansen 2007; Kuzmina 2008; Kristiansen et al. 2017; Racimo et al. 2020). Although many parts of the mechanisms behind the migrations still need to be explained (see Nordquist & Heyd 2020; Wilkin et al. 2021), it is clear that large-scale livestock farming has been a decisive factor. Domesticated grazing animals, not least cattle, formed a fundamental part of this economy. Unsurprisingly, cattle also played an equally fundamental role in religious beliefs and rituals, with strong survival in various Indo-European cultures. Sacrifice of cattle took a central role in this context early on (e.g. Puhvel 1978: 354–362).

Furthermore, there are interesting and well-founded interpretations that sacrifices of various kinds were a particularly significant feature of Indo-European societies. Of particular interest is the creation myth in which these rituals have their background (e.g. Lincoln 1975: 112–145; 1986: 5–20, 41–59). This myth has as its central theme that a primordial being is killed, after which its body is dismembered and the world is created from the different parts of the body. From this perspective, the bodies of both humans and animals can be seen as a microcosm, reflections of creation as a whole. The sacrificial rituals performed by humans occur as a reflection and repetition of the act of creation illustrated in the myth, in order to correspondingly return power to existence.

Animal bones in potentially ritual contexts are common finds at archaeological excavations, although the definition of such contexts is often debated. In Swedish archaeology, where the author has had vast experience as a field archaeologist since the 1980s, a number of sites with extensive bone material – not least from cattle – have been investigated in recent decades (e.g. Artursson, Karlenby & Larsson 2011; Kaliff 1997; Fagerlund 1998; Ullén 2003; Hjärthner-Holdar, Eriksson & Östling 2007; Artursson, Kaliff & Larsson 2017). Most sites include clear ritual elements, although there was for long an unjustified caution in interpreting them as such. Only in recent decades has this changed.

The category of archaeological features that I will mainly focus on here is the burnt mounds (alternatively called "heaps of fire-cracked stones" – Swedish = *Skärvstenshög*). I have already argued in previous contexts (e.g. Kaliff 2005; 2007) that these features – burnt mounds – may represent a Nordic variant of Indo-European fire altars – best

known and described from the Vedic context – which in various forms occurred throughout the Indo-European cultural area (e.g. Edsman 1987: 223). Although mounds of this kind have traditionally been regarded in archaeology as piles of waste or discarded cooking stones – primarily regarded as indicating habitations and not deserving much more attention (e.g. Gustawsson 1949; Jensen 1989; Wigren 1987) – there is in fact much to suggest that they are worthy of a considerably more sophisticated interpretation. Both the design of the mounds themselves, with hidden internal, complicated patterns of laid stones, and the material found make an interpretation of a sacrificial site considerably more plausible.

The author has argued in several previous contexts that at least some burnt mounds, especially the clearly symbolically constructed monuments, instead had a function as cultic tools, even though the exact interpretation of the rituals they were associated with has been more difficult (e.g. Kaliff 1997; 1998; 1999; 2005; 2007). It should be mentioned, however, that occasional interpretations of the burnt mounts as places of sacrifices have been presented also before in Swedish archaeology (Nordén 1925; Bellander 1938), even though this view was mistrusted and generally did not have an impact. The generally negative attitude towards burnt mounds in archaeology is illustrated almost comically in the lines below. I have referred to this passage more than once before, but it may still be worth quoting:

> Burnt mounds are, individually, among the most boring sites with which a field archaeologist must deal. Apart from new data and a new spot on the distribution map, individual sites have little to contribute to our understanding of the past. (Barber & Russell-White 1990: 59)

With such an approach, it is hardly surprising that burnt mounds have often been neglected and only rarely the subject of more active archaeological interpretation work. This is unfortunate, as they can rather be perceived as one of the more enigmatic and multifaceted archaeological features that exist, and not least with a fruitful interpretive potential in a comparative Indo-European perspective.

Despite the name, burnt mounds contain both unburnt and burnt materials, not least animal bones. In the following, based on the find material and the contexts where the mounds appear, I will focus on their function as places for animal sacrifices, of a kind that can be traced back to a common Indo-European background. Of special interest is their role for the sacrifice of cattle, a ritual with deep

roots back to the early Indo-Europeans and their living conditions, as nomadic herders on the Pontic steppe. This does not contradict my previous interpretation of the mounds as altars (Kaliff 2005; 2007) but constitutes a further development of this interpretation. The starting point is the common Indo-European creation myth, specifically that the world is created from the body parts of a dismembered original being. This theme is also crucial for the current analysis but there is more of interest that I have not previously incorporated in the interpretation of the Scandinavian material, themes with a clear connection to cattle and their role in the creation of the world and human life. For the interpretation of sacrificial sites, these parts of the creation myth have great significance.

Unlike when I first started to argue for an interpretation of the burnt mounds as altars, the aDNA revolution has changed the general view among archaeologists regarding Indo-European connections (e.g. Allentoft et al. 2015; Batini et al. 2015; Haak et al. 2015; Kristiansen et al. 2017). Without exaggeration, this view has undergone a 180-degree turn in less than a decade. Although the archaeological material itself remains largely the same, most archaeologists now have an openness to accepting common Indo-European features, with long-continuity parallels in widely differing geographical areas.

When I developed in detail the theory of burnt mounds as fire altars, in my 2007 monograph *Fire, water, heaven and earth: Ritual practice and cosmology in ancient Scandinavia: An Indo-European perspective*, the main criticism did not concern the interpretations themselves but rather the presumed Indo-European background (e.g. Price 2007). I found this reaction strange, as it was precisely the presumed Indo-European origin that made the interpretation likely and reasonable. The Indo-European perspective was simply considered extremely controversial as such, still locked in the critique of historical research abuse, which for a long time paralysed the whole issue (e.g. Arvidsson 2006). However, after the paradigm shift in this regard in recent years, it is now possible to see burnt mounds in their true light, as a Nordic version of an Indo-European altar of fire sacrifice.

The creation myth – a story of great significance

For the interpretation of fire sacrifices as well as many other rituals, knowledge of the basic cosmological ideas about the creation of the world and how existence is maintained is of great importance. Based

on comparative analyses of different cultural contexts, separated in time and space but with common Indo-European roots, it is possible to reconstruct such an original Indo-European creation myth. I shall reproduce it here in a brief, summarized form:

In the beginning of existence, two beings appear. **Manu* and his twin brother **Yemo*. Together they travel through the empty cosmos together with another creature, the primordial cow. **Manu* then sacrifices his twin brother and, with the help of some of the gods, creates nature, animal life and human beings from the body parts. This cosmological act of creation, the killing of **Yemo*, is at the same time the very first sacrificial ritual, of which all later sacrifices are a reflection. Every subsequent sacrificial ritual performed by humans thus serves to recreate and re-energize this primordial sacrifice (see Lincoln 1975; 1986; Anthony 2007; West 2009).

The fundamental importance of the creation myth gives it a remarkable survival capacity in time and space, which is not only reflected in religious beliefs and rites. In fact, many parts of the Indo-European social structure may reflect the creation myth and be sanctioned by it. Based on that view, the following reconstructed version of the Proto-Indo-European myth – with some differences in relation to the reconstruction described above – has been proposed by the historian of religion Bruce Lincoln (1976: 42–43):

> Originally, this myth told of how *Manu, a priest, sacrificed *Yemo, a king, together with a bovine animal, and then created the world from their respective bodies: the physical world and the three I-E social classes (sovereigns, warriors, and commoners) coming from the body of the sacrificed king, while the animal and vegetable species came from the sacrificed bovine. In this myth I felt that we could see something of the mythic "charter" which the Proto-Indo-Europeans established for themselves: the differentiation of priests and kings as differing types of the sovereign; the priest's role as ritual specialist, the king's as that of complete man; the separation of the three social classes; the unique position of cattle as the intimate companion of man *ab origine* and source of all good things; and, last, the crucial importance of sacrifice in the creation and preservation of the world order.

The primordial beings in both the Vedic and the ancient Iranian version of the creation myth have names similar to *Ýmir*: *Yama-* and *Yima-*, respectively. All these names are derived from **Yemo-*, and have consequently the meaning 'twin', something that may seem strange because there is no apparent twin-motif in the myth. The Vedic and ancient

Iranian versions, however, have female counterparts, so closely connected that they have bisexual connotations. As for *Ýmir*, it can be noted that he himself gave birth to children, and thus also appears androgynous. The meaning 'twin' can also reflect a belief in two separate figures, as *Yama-* and his sister *Yamī* in the Vedic version (West 2007: 356–359). The Old Norse version of the creation myth is reproduced in the Eddic poem *Grímnismál* (40–41). It describes how the cosmos – the earth, the mountains, the sky, people and gods – are created from the body parts of the giant *Ýmir*. In *Gylfaginning* (6–8), in Snorre Sturlasson's Edda, a variant of the same myth is retold. The Vedic equivalent is the *Puruṣasūkta* from the *Rigveda* (10.90). Also here, the world is created from the dismembered body of a cosmic giant, an act that stands as a model for the Vedic sacrifice, also with parallels in other Indo-European contexts (Lincoln 1986: 49–64; Näsström 2002: 24–25).

Although the primordial cow seems to play a clearly subordinate role in certain Indo-European variants, such as *Auðhumbla* in the Old Norse variant, there is reason to believe that the cow was an important sacrificial element in the oldest, original version. In an Iranian version of the myth, an ox or a bull – a male bovine – is sacrificed, and from its body parts come all other living species. In the later, classical Persian religious tradition, after Zarathustra, the primordial cow disappears from the centre of the creation story. Zarathustra considered the primordial sacrifice a sin, the first act to distribute portions of the cow for consumption (Lincoln 1975: 135, West 2007: 358). In the European versions of the myth, a female bovine, a cow, appears instead, but now only as a provider of milk and nutrition. This divergence may be explained by cultural differences between divergent branches of the Indo-European family. The fact that the cow as a provider of milk and nutrition is gaining greater importance, mainly in the Indo-European "diaspora" in Europe, could be in line with the fact that the secondary product revolution with regard to dairy products became increasingly important during the time when Indo-Europeans spread west across Europe. New aDNA studies (Wilkin et al. 2021) have shown that the importance of dairy products increased significantly during this time, with a parallel increase in lactose tolerance in humans. Previously, on the steppe, the animals seem to have had their greatest role in the form of meat resources.

Decades before this aDNA study, Bruce Lincoln (1975: 139–144; see also 1980) was already suggesting that the early Indo-Iranian variant here may reflect a more original stage, closer to the original Proto-Indo-European pastoral way of life, and that the primordial bovine was most

likely sacrificed in the original myth. For all the Indo-Europeans, cattle were of crucial importance – as providers of meat, hides and skins and gradually more and more as milk producers – furnishing a large part of the food supply and serving as the basic unit of wealth. And, furthermore, cattle were seen as an essential element of the social order, with society being thought of not just as the collectivity of men but of men and cattle together.

Another figure that appears in the reconstructed myth is a hero named **Trito-* – an enigmatic and poetic name that in itself only mean 'Third' – whose main task is to ensure that man continue to repeat the original sacrifice. This third being of the creation mythology has also been interpreted as a model for the classic Indo-European cattle-raiding myth, and this motif has thus also served as a moral justification for the practice of raiding cattle from foreign tribes. Cattle-raiding is a classic theme, with a very large spread in time and space within different Indo-European cultures. The gods give cattle to **Trito-*, who in turn loses it to a snake with the reconstructed name **h_2ŋ̥g^{wh}i-*. However, **Trito-* eventually overcomes this monster, either on its own or with the help of the celestial god, and then becomes the first warrior and likewise the one who ensures that the mutual dialogue between gods and people can continue. The legends show **Trito-* taking back what rightfully belongs to his people – those who sacrifice properly to the gods (e.g. Mallory & Adams 1997: 138; Anthony 2007: 134–135). This myth, picturing a cosmic conflict between a hero and a fearsome serpent or other monster, could be seen as a symbol of the male Indo-European fellowships' struggle to protect society from external enemies, in other words the Indo-Europeans defeating the non-Indo-European people in the areas to which they arrived, where the serpent symbolized the "others".

This motif may have survived also in Scandinavia until the Migration period, although **Trito-* does not remain in any significant way in the later Norse sources. However, reminiscences of the first warrior and guardian of the relation between gods and man may be found in *Þriði*, one of the many names of Odin (Lincoln 1976: 47). Concrete evidence of **Trito-* from the Migration period, may be found on one of the so-called Gallehus horns, two decorated gold horns, decorated with ornaments, figures and a runic inscription in Proto-Norse, found in southern Jutland in 1639 and 1731, respectively. Sadly, both objects were stolen and melted down in the early 1800s. Early on, however, the horns had been thoroughly documented. The most interesting motif in this context shows a three-headed man carrying an axe (possibly a

hammer) in his right hand. In his left hand he holds a horned animal, probably a goat. At his right side lie three snakes, one larger and two smaller, possibly dead. Lincoln (1976: 58) writes:

> As always, interpretation of an iconographic representation presents many difficulties. The tricephal with the axe may be the hero *Trito (I lean toward this interpretation) or he may be a doublet of the three serpents. One cannot be sure. But what is certain beyond any doubt is that this is an independent German reflex of our myth, containing the themes of triplicity, serpent enemies, and the taking of livestock by force. We are thus led to reconstruct a myth in which an Indo-European hero whose name was *Trito, 'Third,' suffered at the hands of a monstrous figure, a three-headed serpent who was explicitly identified with the aboriginals of the area in which the myth was told. In the first encounter, this serpent stole some cattle belonging to the hero or to someone close to him, but in a second meeting […] he defeated the monster and recovered the cattle.

It is close at hand to link this motif to the widespread beliefs within the Indo-European cultural sphere, in milk-sucking and milk-drinking reptiles, often snakes but sometimes also other species. As Davide Ermacora (2015; 2017) has analysed, with evidence from folklore, linguistics and historical sources, there are countless narratives with cow-suckling and milk-stealing animals in various European folklore. These creatures are said to sneak into the domestic sphere to suck life-giving milk, alternatively blood from cattle, and sometimes also from women. The snakes could also enter the body of a sleeping person. The early documentary evidence shows motif of breasts or udders suckled by a snake or other animal. That this motif, with roots in the creation story, symbolizes the struggle for livestock – cattle-raids – and the use of the resources from these seems reasonable indeed, especially considering its close connection to the creation story as such.

As an archaeologist, I will not elaborate further here on the purely religious-historical and philological analyses of the Indo-European myths. The purpose of still delving somewhat into these questions is to clarify the central position that sacrifice, and not least the sacrifice of cattle, has among Indo-European rituals. With its clear roots in the creation myth and its close connection to the living conditions of the early Indo-European societies, it form a fruitful theoretical foundation for the interpretations of the archaeological finds from Scandinavia that I intend to make in the following. A particularly interesting part of the creation myth in this respect is its illustration of the significant role of

cattle for human existence. Along with this, the myth's general emphasis on sacrifice in order to maintain world order provides a clear explanation as to why cattle become a particularly important category of sacrificial animal. Such deep and important themes – expressed in both myths and rituals – have a great endurance in time and space, especially when rooted in some of the most crucial economic and ecological conditions for the survival of society.

The abundant presence of bones from cattle in the archaeological material has a great interpretive potential in light of this. Although the Old Norse version of the myth is not documented in writing before the medieval period, most suggest that its roots go back to the establishment of Indo-European culture in Scandinavia at the dawn of the Bronze Age. This is the time that the pastoral Indo-European culture, with its intimate connection to livestock and the production of dairy products, also gets its real impact in Scandinavia. A social structure is now being established whose economy and entire existence is dependent on animal husbandry. Undoubtedly, religious beliefs and rituals have also been an integral and inseparable part of this social structure (for an overview, see e.g. Kaliff & Oestigaard 2020: 125–154; 2022: 70–96).

A physical embodiment of the primordial myth

Burnt mounds occur in very different contexts, frequently on sites designated as cemeteries but as often also on settlement sites. They are typical for southern and central Sweden but with examples also in the northern part of the country, as well as in Norway and Finland. However, they are particularly common in eastern central Sweden, with the largest concentration located in the province of Uppland. The majority of the excavated monuments are dated to the Bronze Age (*c.*1700–500 BCE), with most dating to the latter part of the period. In total, however, they show a much longer chronological spread, from the Late Neolithic to the Viking period. Many individual mounds also have a long period of use, with several centuries passing between the earliest dating and the last. At the same time, the morphological variation among the excavated burnt mounds indicates that the features that go under this name can in fact constitute traces of rather different activities (see Jeppson 2016 for an overview).

Typically, the burnt mounds contain a large amount of fire-cracked stone, usually together with soot and charcoal. However, there is a relatively broad variation, something that has resulted in misunderstandings

when the interpretations of different excavation sites are compared. A closer study of different types of mounds reveals the differences. Some burnt mounds seem to be unorganized deposits of burnt stone and other residual material, while others are very complex structures indeed. In the former cases, the well-established interpretation as "rubbish heaps" may well be true, while other structures give a completely different impression. The latter contain elements such as stone kerbs and complex inner stone structures in forms of, for example, circles, spirals and stone foundations under the filling. Many burnt mounds also contain material that, at first sight, may seem contradictory. Apart from fire-cracked stone, soot and charcoal, there are pottery items – for dairy products and in some cases probably ritual drink, libation and so on – stone tools and metal objects. Furthermore, grain, seeds and grinding stones are common finds, material associated with agriculture and fertility. Bones – both burnt and unburnt – from various animal species make up the absolute largest part, with cattle as the most dominant species, followed by sheep and goats and to a lesser extent pigs, horses, dogs and domestic birds and more (e.g. Ullén 2003: 243–256; Wigh 2008: 371–389; Larsson 2014: 295–298; Björck 2014: 214–216; Artursson et al. 2017: 66–68). In fact, the finds that meet us in the burnt mounds to a large extent constitute what one might expect as traces of a sacrificial place. Human bones also occur, something I will return to below.

Looking at the variety of animal bones in the burnt mounds, it is rewarding to draw parallels with Vedic sacrificial practice. For the Vedic context, the suitable sacrificial animals are described in the Brahmanic texts – the commentaries on the Vedic scriptures. Different animals, like other offerings, had their different roles in the sacrificial rituals, a phenomenon reminiscent of the seemingly different finds in the Scandinavian burnt mounds. *Śatapatha Brāhmaṇa* describes which sacrificial offerings a good sacrifice should include. Both cattle and horses are recommended, as well as valuable items (Dutt 1906: 160). Other important oblations are cow milk, ghee, grains, flowers, rice cakes and water for libation. It is clear that the potential sacrificial animals have very different values and status, but that also animals of "lower hierarchy" can have a role in the rituals as a whole:

> It is explicitly stated in Brahmanic texts that five creatures were suitable for sacrifice in Vedic India, in descending order man, horse, cattle, sheep, and goat. The goat is the cut-off point, leaving such animals as pig and dog beyond the pale, as well as sundry undomesticated beasts. The excluded

> creatures could figure in the margins of the great sacrificial tableaux. (Puhvel 1978: 354)

Despite similarities, it is not my intention to primarily seek connections between the Vedic and the ancient Scandinavian ritual traditions in particular. Instead, I see them as different "ritual dialects" with a common Indo-European origin, in the same way as the Indo-European languages, and like these developed in different directions over time. My view, however, is that significant similarities remain, going back to a common origin, especially in the most important rituals and religious beliefs, and that the comparison is nevertheless deeply meaningful. That the Vedic tradition is particularly grateful to refer to is primarily because it consists of such an extensive, ancient and also well-documented material. It covers a tradition more than 3,000 years old, which still continues today. Early scholars working on comparative mythology, not least the famous Friedrich Max Müller (1823–1900), emphasized the importance of Vedic mythology to such an extent that it was practically equated with an original Proto-Indo-European tradition. Later, most scholars have been more cautious, but the Vedic mythology is nevertheless considered central to the understanding of the oldest history of the Indo-Europeans (Puhvel 1987: 14). Studying Vedic rituals means looking into a tradition that began to take shape the same time as the Scandinavian Bronze Age culture. We look down into a time well, which at the bottom hides a common source, where the water still flows freely in different directions.

Thus, even if one should not seek exact conformities, it is reasonable to look for general similarities between Vedic rituals and equivalents in Bronze Age Scandinavia. Although several centuries had passed since a common origin on the Eurasian steppe, this does not necessarily constitute an obstacle. Not least, culturally profound phenomena such as religious rituals do not change easily and hence have great potential for survival (see Kaliff 2007: 47–54). Grand Vedic sacrifices are examples of advanced collective rites, which require great effort, resources and time, leaving physical traces that are possible to detect by archaeological methods: altars, hearths, pits for ritual waste, post-holes from ritual structures and buildings. Furthermore, the entire sacrificial performance signifies a re-creation of the cosmos, in accordance with the primordial myth. For example, a grand Vedic fire altar is built of burnt clay bricks in five layers, corresponding to the five elements of special cosmological significance, in turn corresponding to body parts of the first sacrificial

victim in the creation myth. Materials are taken from each part of creation for the purpose of building the altar: earth, water and fire for the bricks, grass to be placed on the altar, and so on. Together with the burial of ritual objects, including pots, and the ploughing and sowing of the ground in preparation for the altar, this symbolizes how the combination of elements contributes to the act of creation (Staal 2001: 65–70, 118; cf. Lincoln 1986: 60–61). The description of the Vedic altar and its building process shows construction details and elements that are easy to interpret also into the documentation material from several excavated burnt mounds.

In previous works (e.g. Kaliff 1999; 2005; 2007) I have presented an interpretation of fire-cracked stones, as produced for ritual reasons in a deliberate process. This also in possible analogy with the fragmentation of the primordial being in the myth of origin. Burnt stones as a building material would then have a similar symbolic meaning as the similarly burnt clay bricks of the Vedic altar, a material transformed in such a way that fire was believed to become active in it. Bricks contains a combination of elements – earth, water and fire – giving it a profound symbolic meaning. Through the transformation of the clay, it is believed that the god of fire – *Agni* – becomes active in the material, a crucial and meaningful part of the ritual (Staal 2001: 94, 130). Burnt stone, especially in combination with water, could have had a comparable meaning (e.g. Zimmer 2009: 185; cf. Kaliff 2007: 121–134). Heating stones and making them crack by pouring water would result in a material with a similar, symbolic combination of elements: rock, water, fire and also air.

> If one can see sufficiently clear evidence for a doctrine associated with this, then this is itself a highly valuable support for a connection to other Indo-European contexts and a common Proto-Indo-European background. The ritual use of burnt mounds – their location in the landscape, the effect of fire and water on the stone as well as the deposition of ritual objects and sacrificial remains – can be interpreted in terms of the creation myth found in different Indo-European contexts, where different elements are enclosed in each other and converted into other forms. Moreover, cult continuity is clearly seen in rituals structured around water and wells. (Kaliff & Oestigaard 2020: 270)

The burnt mounds and traces of cattle sacrifice

Although the extensive bone material found in the burnt mounds is a well-known archaeological feature, it has traditionally been interpreted

as a profane residual product – the burnt mounds as piles of waste. Other tentative interpretations suggest that burnt mounds could be butchering sites and places for treating hides and leather (e.g. Elfstrand 1995). Illustrative examples are the sites of Sneden and Ängesvallen in Litslena Parish in the county of Uppland, where several burnt mounds were excavated in the 1990s. The largest structures were almost 15 metres in diameter, and primarily interpreted as possible large-scale butchering places, although ritual and religious connotations were not ruled out (Fagerlund 1998: 83–85). Bones from cattle were by far the most common find, in addition to bones from pigs as well as horses and also humans. The deposited bones consisted mainly of parts of skulls and teeth. One of the monuments specially stands out, with a back-filled water well found beneath the mound. The back-filled material was similar to the filling of the burnt mound itself, and the whole complex was as ^{14}C-dated to the timespan 400–200 BCE (Fagerlund 1998: 80). The bone deposits in the mounds, the combination of burnt material and the underlying water well are phenomena that give clear cosmological connotations. Bodies were cut up, parts were burnt and parts were deposited together with stone, soil and water in various combinations.

Another well, with similar filling, in a context with burnt mounds, was discovered on the Bronze Age settlement site of Apalle in Övergran parish, also in Uppland, excavated in 1988. In this case, the burnt mounds lay adjacent to the well, in central locations on the settlement site. As in Sneden and Ängesvallen, these mounds also had a complicated interior structure, and contained an interesting bone material, with cattle as the dominant species, followed by sheep and goats. The Apalle settlement had extremely good preservation conditions, usually not found on sites from this period. In total, just over 360 kilograms of bones from cattle were documented, which constituted the majority of the 850 kilograms of bones that could be recovered. The bones were divided into more than 260,000 fragments all together, of which approximately 25 per cent could be identified. The extent of the bone material is striking and by far exceeds the material found at any other site from the same period in Scandinavia, investigated up to date.

The slaughter age of the animals at Apalle varied greatly. As the optimal age for slaughter is generally considered to be the time when the animal has recently become fully grown, one would have expected that a majority of the bones reflected this age, provided that the site mirrored an ordinary, profane slaughter (Ullén 2003: 244, 259–261

with cit. ref.). An alternative explanation, however, is that these animals had been killed – sacrificed – for reasons other than that they had reached the perfect slaughter age. When animals were selected for a sacrifice, there may have been other decisive criteria. Also the area around the water well was dominated by animal bone, as well as the refilled well shaft itself. A total of roughly 200 identifiable bones were retrieved from this context, including jaws and skulls from cattle and pigs, but also from a human. Remains of parts both rich and poor in flesh occurred, which means that the bones cannot be regarded solely as butchering waste. In the report on the excavation, these finds accordingly were discussed in terms of sacrifices (Ullén 2003: 239; cf. 1996). Apalle has also been presented as a place where especially horses and dogs have been treated in special ritual manners of Indo-European origin (Kaliff & Oestigaard 2020: 266–267; 2022: 68–69). However, the finds of bones from cattle – which made up the vast majority of finds – also showed clear ritual features, not least represented by deposits of skulls and jawbones (Ullén 1996: 174–177).

Another significant site, dated to the Late Bronze Age and earliest Iron Age (*c.* 1000–400 BCE) is Ringeby in the province of Östergötland, a cultic and burial complex excavated in 1993–1994 under the direction of the author (e.g. Kaliff 1997). Four burnt mounds were documented, arranged in pairs, beside extensive traces of other ritual activities: deposits of burnt human bones, cremation sites, hearth pits and also a small cultic building. Unburnt bones from mainly cattle and sheep/goat were found in the burnt mounds, and in one of the features, beside a large altar-like block, horse bones were also present.

Yet another interesting site in this context is Hulje in Högby parish, also in Östergötland, excavated in 1995 (Kaliff 2001). ^{14}C datings found the activities there took place periodically over a relatively long period, from the latest part of the Bronze Age up to the mid-Iron Age. At Hulje, it is not burnt mounds as such that attract interest but fire-cracked stone deposited together with bones in other contexts, similar to the water well at Ängesvallen described above. Close to a wetland, a system of pits with similar fillings – fat, greyish material, pieces of charcoal and small fire-cracked stones – was documented. The largest find category was burnt and unburnt bones, mostly from cattle but also from sheep, pigs, domestic birds and horses. Close to the pits with deposited bones, a water well was discovered. The well shaft had been filled with a packing of fire-cracked stones. In its upper part, there was a concentrated deposit of cremated, crushed bones from a sheep or goat,

arranged in a manner indistinguishable from a human cremation grave (Kaliff 2001: 449–458). Hulje's significance as a sacrificial site has been confirmed by a later, extended excavation in 2009. Yet another filled-in water well was documented then, together with about 20 hearths and ten large cooking pits, adjacent to an ancient brook with sacrificial depots. Also, in this water well, a burial of a sheep or lamb had taken place. The cooking pits, of a dimension not found on ordinary settlements, showed that large amounts of meat were prepared and served, primarily from cattle, consequently interpreted as traces of ritual meals (Pettersson 2013: 25–30).

The documentation of several excavated sites from the province of Uppland in eastern Middle Sweden, examined over the past 20 years, shows similar ritual features: Ryssgärdet and Sommaränge skog in Björklinge parish and not least Nibble in Tillinge Parish – to date the largest Bronze Age cultic site excavated in Scandinavia – as well as Skeke and Björkgärdet in Rasbo Parish (Forsman & Victor 2007; Hjärthner-Holdar, Eriksson & Östling 2008; Artursson, Kaliff and Larsson 2017). At Nibble, Skeke and Björkgärdet, extensive sacrificial activity has been documented, including ritual cooking. The find material consists primarily of large amounts of bones, with unburnt teeth as the most commonly preserved material. The bones are mainly derived from cattle, with smaller amounts from sheep/goats and horses. They have been deposited both on ritual cooking stations, in burnt mounds and also together with human remains (Artursson, Karlenby & Larsson 2011: 421–423; Larsson 2014: 163, 299–300; Björck 2014: 214–216). The Skeke site is interpreted as a settlement and a cultic site, with a continuity of more than 1,500 years, from about 1100 BCE until the mid of the first millennium CE. A large and centrally located burnt mound plays a particularly important role. Beginning as a burial site, this mound was then used as an important cult site for centuries. During one period, a small cult house was built into the mound. At both Skeke and Nibble, water wells were found directly adjacent to cooking stations, cult houses and burnt mounds. The water may have had a direct functional significance in cooking, but the wells were probably mainly associated with a special ritual quality, as a sacred and special water coming from the ground (see Kaliff 2007: 123–130).

A systematic, comparative study of 31 burnt mounds from the Lake Mälaren Valley of eastern central Sweden was carried out as part of the processing of the results of the Skeke excavation (Larsson 2014: 125–127). These burnt mounds all consisted of relatively newly documented

sites, excavated from the 1990s onwards. The burnt mounds studied had a long dating span in total, from around 1400 BCE right up to the beginning of our era. Each example was assessed based on its location on each site, in relation to both settlements and other ritual features, and also on the basis of its complexity and the time span it covered. Based on this analysis, a main division into three categories of burnt mounds was made, labelled A, B and C. Particularly complex features that had been used for a long period of time, category A, were often found centrally at settlements. Here, activities such as cooking, sacrifice and human burials, as well as special crafts such as bronze casting, were performed. On the outskirts of the sites were found the slightly less complex burnt mounds, category B. In these, cooking was the central activity, often with signs of being a ritualized activity, sometimes also supplemented with burials and traces of craft. Finally, in the outermost parts of the sites, the relatively simple burnt mounds occurred, category C. Here, cooking seems to have been the sole main function, and the mounds had been used for a relatively short time (Artursson, Björck, Grandin et al. 2017: 131).

Humans and cattle

The combination of human bones and other finds in the burnt mounds could indicate a primary function as graves. However, this is not self-evident. The connection between the different find categories in the burnt mounds can be more multifaceted. The archaeologist Anna-Sara Noge (2009) has conducted a detailed study of 98 excavated burnt mounds in the northern part of the Lake Mälaren Valley in eastern Sweden, which mainly aimed at explaining why human bones were deposited in them. The study showed that human bones occurred in about a third (32 per cent) of the mounds. Clear internal structures were more common in the burnt mounds with human bones, and about half of these had internal stone circles or kerbs. Of the mounds that lacked human remains, only about a quarter had such constructions. The mounds with human bones also showed a greater variety in general. Nothing indicates that the human remains were deposited after the primary use of the mound. They were likely to have been deposited at the same time as the other material in the mounds, or very shortly after.

A similar study was previously done by Martin Rundkvist (1994), analysing 42 burnt mounds in the eastern part of the Lake Mälaren Valley. Of these, ten contained human remains. Furthermore, the study

showed that 80 per cent of the mounds were built during the Bronze Age, mainly the last half of the period. The Early Iron Age datings were extremely few, while they recurred to some extent during the late Iron Age. Burials of human bones occurred only during the Bronze Age, especially the latter half of the period, when 40 per cent of the mounds contained burials. Noges and Rundqvist's results are consistent in terms of the fact that burnt mounds with human remains more often feature kerbs and interior stone circles. Rundkvist also notes that they are often slightly smaller, that they are more round in shape, that they are placed on bedrock and that they more often contain bones and teeth of livestock, and also potsherds.

Comparative Indo-European studies show that the boundary between grave and cultic place can be very fluid indeed, not least between graves and altars (see Kaliff 2007: 75–84). There is a close general connection between graves and altars, as attested in several ancient cultures. In classical Greece and Rome, as in Vedic India, the altar could take the shape of a burial mound, where sacrifices also were performed. Originally this sacrifice was performed on real graves, but the form of the burial mound was later transferred to what became a pure altar (Edsman 1987: 223). A reasonable interpretation would therefore be that important graves also functioned as places of worship – altar constructions – and that the grave and cult functions reinforced each other. The Norwegian historian of religion Emil Birkeli (1938: 56) believed that in pre-Christian Scandinavia the grave was actually the most important cult site, also with an altar function. This was an enduring tradition, and well into the nineteenth century it was the custom in parts of Scandinavia to make offerings on the farm's burial mound.

That human remains were believed to strengthen the sacred site, and that the bone deposits as such should be seen as one of several important ritual activities, not necessarily the most significant, can be clearly illustrated by the example of Nibble. On this site, only five graves had been laid out in the central, ritual area, within the course of 500 years. This clearly shows that the sites that are often referred to in archaeology as cemeteries can in fact have a much more complex meaning than what is often first assumed on the basis of terminology (e.g. Kaliff 1997; 2005; 2007). There is also much to suggest that burials during the Bronze and Iron Ages in Scandinavia, not least cremation burials, were performed according to rituals with strong roots in the Indo-European myth of origin. In Vedic tradition, cremation is also a sacrifice, where the body is offered to the gods as a dead person's

final religious act, and cremation not just a destruction but simultaneously an act of creation (Parry 1982: 340; Ghimire & Ghimire 1998: 64–65; Barrett 2008: 52–53). Also, in ancient Scandinavia, at least during the late Bronze Age, it is reasonable to assume that the cosmological view of burial ritual and sacrifice largely coincided, and expressed in the combination of cremated human bones deposited together with sacrificial remains.

The connection between human remains and bones from cattle in burnt mounds could also have an even more direct connection to parts of the Indo-European myth of origin. According to this myth, as shown above, there is a special connection between humans and cattle from the beginning, clearly expressed in the myth. This special relationship – humans and cattle – gets a very clear and powerful ritual expression in this form, where both humans and animals, mainly cattle, are returned to the creation in a similar way, incorporated into the burnt mound, possibly intended as a physical manifestation and a repetition of this creation in itself, very much like a Vedic altar.

Sacrificial rituals and ritual meals

The food prepared within ritual complexes such as Nibble, Skeke and Björkgärdet consisted of ingredients with a relatively small variation: mainly meat from cattle and sheep/goats and more rarely pigs and horses, as well as cereals such as barley, wheat and small quantities of hazelnuts. Wild animals were almost completely absent in the ritual meals but they were found in graves at the same sites (Artursson, Björck, Grandin et al. 2017: 132). Clearly, domesticated animals and crops were primarily used in the rituals. It is then reasonable to assume that the most important domesticated animals, with profound cultural significance, had a particularly prominent role in sacrifice. This also fits well with the fact that bones from cattle are the most common find in these archaeological contexts.

That ritual meals formed an important part of the ancient Scandinavian sacrifice is clearly attested in the Old Norse sources, preserved in written form only from the medieval period but by all accounts largely recurring on an oral tradition, with potentially very deep time roots (e.g. Hultgård 1996; Näsström 2002: 182–184). Also, in a non-written society, there can be great ability to preserve traditions more or less intact for a very long period of time. This, provided that there was a strong oral tradition, preferably transmitted in bound verse

form, with literal transmission from generation to generation, as in for example the Vedic ritual tradition that still survives in Hinduism, living on in an unbroken line for more than 3,000 years. The Vedic tradition was only transmitted orally, and writing a manual to read from was actually considered impure and inappropriate (Staal 2001: 29–40; Witzel 2003: 68–69). It is likely that also the Old Norse society had such tradition, at least partially equivalent, as indicated by Eddic poems and skaldic verses (e.g. Mitchell 2003: 203–206). Changes certainly took place over time, but the core of many rituals may have remained relatively intact, from the Bronze Age up to the Viking period. Thus, there is every reason to assume that the importance of sacred meals has very deep historical roots, and the ritual cooking then be understood as an important part of the sacrificial ritual itself: an interaction between man and divinity.

Based on this, and despite the distance in time, there are good reasons to see a connection between burnt mounds and one of the cultic features mentioned in the Old Norse sources, namely *hörgr* (or *hǫrgr*). This term sometimes refers to a rock but it can also be a structure of stone or wood, possibly a sacrificial altar, and has linguistic equivalents in Old English *hearg* 'pagan temple, idol', Old High German *harug* 'grove, place of sacrifice', all descended from the reconstructed Proto-Germanic **hargu-*, possibly meaning 'sacrificial mound' (Koch 2020: 142). It may originally have been a natural place in the form of a rock or an assembly of stones, but later developed into a proper altar structure. Cultic sites of the type exemplified above are often built on rock plateaus, where the original rock is "built on" and reshaped by adding rocks and building cairns and burnt mounds (Kaliff 2007: 113–114). In the Eddic poem *Hyndluljóð* (10) there is an account of the worship of the goddess *Freyja* taking place at a *hörgr* of stone. The ritual included animal sacrifice, and the text describes how the sacrificial blood was poured on the *hörgr*. The poem is only preserved in a manuscript from the fourteenth century, but it has been considered to contain a realistic description of a sacrificial scene (Hultgård 1996: 29–32; cf. Vikstrand 2001).

It is reasonable to assume that the pre-Christian cult in Scandinavia was a unifying phenomenon of great vitality, hence with the ability to remain relatively intact for a long time, particularly the most essential and thus most conservative elements in terms of sacrificial rites and associated religious beliefs. This may well have been preserved since a very early stage, not unlikely back to Core Indo-European or even Proto-Indo-European times. Rituals and cultic tools associated with

cattle sacrifice most likely constituted conservative elements of precisely that kind, closely linked to particularly important living conditions – animal husbandry – and the basic organization of society. This, combined with a strong oral tradition, at least partly transmitted in bound verse form, explains the survivability of these common Indo-European elements, preserved even in the Old Norse poetry of the Late Iron Age. As the linguist Stefan Zimmer puts it:

> Proto-Indo-European Culture can only be understood in the framework of Proto-Indo-European society, whose main values are glory, freedom, truth, and hospitality (no ranking intended), which had relatively flat hierarchies, no professional priests or full-time 'cult specialists', no permanent kingship, no temples, no other intellectuals than poets, lit. 'word smiths'. (Zimmer 2009: 181)

Burnt mounds as sacrificial tools – altars – fit well into this scenario, as they begin to appear at a time, the dawn of the Nordic Bronze Age, when Indo-European lifestyle and culture are likely to have had a major impact. It is then not surprising that important elements survived relatively intact over centuries and millennia, principally similar to the well documented Vedic tradition, with the sacrificial ritual reflecting particularly important aspects of the society in which they originated.

To protect the most precious – the cattle

There is archaeological evidence that some burnt mounds, or rather the sites where these are located, may also have played a ritual role linked to the Scandinavian variant of the well-known Indo-European **kório-* or "Männerbunde", the associations of younger warriors that are believed to constitute another important common element dating back to a Proto-Indo-European era (Kaliff & Oestigaard 2022: 68–69). The reconstructed Proto-Indo-European word **kório-*, approximately mean 'unit of warriors', and a prominent feature is assumed to have been the initiation ritual of its young members. This involved being sent to live outside society, acting as ferocious wolves or dogs, in ways diametrically opposed to normal life, before being integrated back into society as a rite of passage into manhood (e.g. McCone 1987: 107–108; Mallory 2007: 93–94; West 2007: 448–451; Brown & Anthony 2019: 110–117).

The possible connection between the **kório-* institution and the burnt mounds may come in handy in light of the **Trito-* theme of the creation

myth. The link to cattle and their crucial importance to society is very clearly expressed in this part of the myth. As Bruce Lincoln puts it in his paper "The Indo-European cattle-raiding myth" (1976):

> There is, moreover, an initiatory significance to this myth, as in so many other myths of monster slaying, for the initiation of Indo-European warriors seems to have often involved a combat with a mock monster of triple form, as Dumezil argued early in his career. In conquering this monster, the young warrior repeats the events of primordial times which are related in our myth. He becomes again *Trito, the first I-E warrior, and he assimilates himself to the entire I-E onslaught that overthrew aboriginal opponents in every corner. The cattle-raiding aspect of the myth may be understood in similar ways. In order to do so, we must again note the enormous importance of cattle to the Indo-Europeans. Cattle were the very basis of the I-E economy, forming the essential measure of wealth and means of exchange. The animals supplied milk and meat, the main elements of the food supply; hides for clothing, blankets, bags, and shields; bones for tools; dung for fuel; and urine for disinfectant. They were also crucial to the social order, serving as bridewealth and wergild. Society itself was understood as the collectivity not of only men, but of "men and cattle" or "bipeds and quadrupeds." Given this enormous importance of cattle within the socio-economic order, it comes as no surprise that the Indo-Europeans were always interested in preserving the cattle they had and in procuring more. Their prayers are filled with requests for cattle, and cattle raiding seems to have been one of the most important pursuits of the warriors. Certainly their heroic literature is filled with stories of such raids. (Lincoln 1976: 62–63)

The combination of the sacrifice site for cattle – the burnt mound – and the adjacent (or underlying) water wells where residual material from the sacrifice has been deposited can be seen as a very powerful physical, ritual manifestation of important parts of the creation story, as well as its link to the classical raiding myth. If the sacrifice of cattle and other animals, manifested in the bones of the burnt mounds, repeats the disintegration of a primordial being in the creation myth, the other part of this myth, with **Trito-*, could be manifested in the well and its sacrificial deposits in the underworld. Water wells, as well as sacrificial pits, are likely to be associated with chthonic creatures of a kind also associated with the myth, where **Trito-* assumes the form of a snake or other underground creature. The water well and the underground are a deeply symbolic, physical manifestation of this motif. A motif that "combines two of the best known mythic themes: that of

slaying a serpent or monster, and that of stealing a neighbor's cattle" (Lincoln 1976: 43).

To conclude: burnt mounds as ritual tools fit well into an interpretation as physical manifestations of elements that occur in the Indo-European creation myth. The building materials in the mound itself, as well as its content of bones, reflects in a very illustrative way the cosmological first sacrifice, particularly the primordial bovine. The underlying pit, or water well, can similarly constitute a manifestation of the myth of **Trito-*, and his struggle against an underground creature, **$h_2ng^{wh}i$-* in the reconstructed Proto-Indo-European origin myth. In the shape of a snake or other chthonic being, this creature is physically manifested in the water well, and the sacrificed materials deposited in its shaft. The archaeological record shows a long continuity, from the beginning of the Bronze Age to the Late Iron Age, but rituals and beliefs linked to this remain much later, up to modern times. In addition to the stories of snakes and other creatures, believed to suck milk from cattle, there are many other Scandinavian folk-traditions of mythical, underground creatures, often linked to wells and water. The fact that both myths and rituals develop over time, due to external factors and the mere passage of time, does not necessarily mean that the core of the content changes. Significant beliefs do not change without strong reason. While it is not always possible to show in detail the complete mechanism behind the continuity of a deep-rooted belief or ritual, its mere existence speaks more to an age-old origin than the opposite.

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4. Monsters and cattle
A topos and its mutations in Indo-European mythology

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Abstract

This chapter seeks to substantiate a few general assumptions about the social significance of cattle-stealing monsters in various IE traditions. By taking into account that these monsters appear under variously socially distinguishable guises – traversing the whole spectrum of an intruding guest, a bad host, a stingy patron and a malicious client – it can be argued that these myths mainly revolved around the perceived crisis of hospitality and ritual economy. Examples are given to illustrate particularities of this pattern in what seems to be offshoots of a linguistically encoded tradition: one with a possible Core Indo-European (CIE) basis (the tricephalus myth) and the other dating back at least to the time of Proto-Indo-Iranian (the Vala myth). In the final analysis, an attempt is made to demonstrate how the notion of the cattle-stealing monster – considered here as a variation of the milk-suckler reptile – can be rendered culturally meaningful in terms of certain prevalent ecological and socio-economic factors.

The controversial cases of the Anatolian Illuyanka myth and the visual representation of a tricephalic monster on the fifth-century CE lesser horn (B) from Gallehus are briefly commented upon in two additional excurses (addenda 1 and 2).

1. Background

The hyperbolic representation of friends and foes in Indo-European (IE) mythological traditions suggests that the distinctiveness of these roles was not as clear-cut as one might initially expect. Monsters are

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not always unambiguously depicted as chaotic and malevolent beings. They are, for instance (as indicated by the cases of Vedic Vala [RV 10.68.10] and Greek Geryon [see below]), typically inclined to weep and show genuine human feelings. They are also – despite their distinctly non-human, serpentine or otherwise preternatural appearance – represented as cultural beings. Unlike animals, they may use utensils while eating and they make their own cheese. Another cultural trait of the monster is its desire for livestock and other human commodities. Monsters are not gods in a strict sense; they have to be mortal, since one of their primary functions in myth is to get killed or at least severely impaired; while typically found in the wilderness or in some distant region, they still inhabit the same ontological plane as their heroic adversaries.

All this seems to imply that the quintessential IE monster can be understood as a hypercorrective to a category of human agents with whom the intended auditors of the monster myths had interacted and familiarized themselves on a regular basis, either within the framework of certain formalized and potentially precarious social settings (e.g. trading, guest–host relations and patron–client relations) or in the less formalized context of raids and exploitations of neighbouring groups from which similar acts of hostility could be expected in return.

These tendencies all seem informed by an underlying cultural proposition: the monster affords its monstrosity *in spite of*, not *in the absence of* certain recognizably human traits. Unlike a wild animal attracted to an exterior object through an uncontrolled force of instinct (say of hunger, self-defence or sexual reproduction), the monster makes a feasible (albeit neglected) claim to ownership. Consequently, the preternatural appearance of the monster can be understood as a mask mythologically designed to divert attention from the fact that this is not just an *unnatural* but in fact a *cultural* being.

In what follows, I intend to make a few general assumptions about the social significance of cattle-stealing monsters in various IE traditions. Examples are given to illustrate particularities of this pattern in what seems to be local offshoots of a linguistically encoded tradition: one with a possible Core Indo-European (CIE) basis (the tricephalus myth) and the other dating back at least to the time of Proto-Indo-Iranian (the Vala myth). In the final analysis, an attempt is made to demonstrate how the notion of the cattle-stealing monster – considered here as a variation of the milk-suckler reptile (see Ermacora 2017) – can be rendered culturally meaningful in terms of certain prevalent ecological and socio-economic factors.

2. Social and ecological conditions

The rationale behind the perceived adversarial claiming, stealing and keeping of livestock in IE mythologies (Cacus [*Æn.* VIII 190ff.; Prop. IV 9], Geryon, Vala etc.) apparently amounts to more than a general proclivity for treating livestock as a prominent measure of wealth. In order to provide a more complete picture, it is essential to distinguish between the specific systems of exchange in which such quantities of wealth were invested.[1]

As we shall see, no simple binary (e.g. insider vs. outsider) will suffice to make sense of such systems. Also, the two systems (or forms of relation) are both flexible and overlapping. The first system is based on principles of hospitality, that is, on how to maintain and establish social bonds through prescribed rules of conduct. Festive occasions of sacrificial food-sharing provide the most apparent setting for such forms of conduct.[2] They do so both in an imaginary (vertical) sense by inviting gods to partake as guests in a sacrificial meal and in a more realistic (horizontal) sense by conjoining members of a sacrificial community through rites of commensality. The second system is based instead on principles of patronage, that is, on how to administer the practical means to such a hospitable end through the recruitment of ritual professionals. This latter group can best be grasped through the

[1] For an ecologically and socio-economically informed comparative study of myth, ritual and social organization among semi-settled pastoralist groups (the test case being Proto-Indo-Iranians and the present-day Nilotic peoples of Africa), see especially Lincoln 1981. Bruce Lincoln (personal communication) kindly reminds me of the likely tendency in pre-monetary pastoral economies to treat livestock, not just as "tokens of wealth" but as both means of production and means of exchange.

[2] The search for a universally coherent, original significance of sacrifice – as undertaken by prominent students of religion over the last centuries – has been refuted in more recent times as a largely misinformed pursuit (see Parker 2011: 125–126). Still, one circumstance should remain fairly clear in so far as the archaeological and historical manifestations (rather than the advanced priestly exegesis) of sacrifice is concerned: the social significance of sacrifice seems far more premised on principles of sharing and bonding rather than on the notion of giving things up. The extended "meaning" of sacrifice – not least according to the relatively recent Judeo-Christian notion of the unconditional gift – has thus come to overshadow some of the early preconditions for ritual slaughter. Animal sacrifice is virtually unthinkable without the domestication and organized distribution of natural resources (see Smith 1987). The sacrificial slaughter of animals (+ the distribution of food within the group) does not just sustain the group by supplying its members with food; it also symbolically defines and maintains social relations within that group. There is even archaeological evidence to suggest that "cattle and sheep […] were initially more important in funeral rituals than in daily diet." (Anthony 2007: 159).

semi-mythical category of so-called poet-sacrificers (or poet-priests) in Vedic and Avestan.

Whereas guest–host relations tend to involve equally resourceful insiders and outsiders sharing the same interests and moral obligations, patron–client relations require an employment contract (see the introductory chapter). Even if patrons and clients need not share the same interests, they may still find a durable form of coexistence in which to mutually benefit one another. If these principles are understood to have been violated or obfuscated by one (or some) of the involved parties, however, there are various familiar means by which to address such failures. Guests and hosts may become estranged (see the semantics of Latin *hostilis*) by dishonouring the principles of hospitality, that is, if the guest fails to reciprocate the favours of the host or if the host fails to adequately entertain and protect his guest. Similarly, patrons may provide miserable working conditions for their clients and clients may seek to cheat, or even disempower, their patrons by misrepresenting or misusing their skills.

Consequently, the monster need not just assume the role of an uninvited (out-group) creature who parasitically benefits from its host's (in-group) table. In addition to this familiar pattern, monsters may also appear in the guise of either hosts, patrons or clients. The theme of unlawfully claiming livestock can thus be taken to reflect a perceived crisis of hospitality and ritual economy:

Stranger/anti-guest (AS Grendel, ON Hrungnir) ←
GUEST-HOST → Stranger/anti-host (Gr. Polyphemus, Geirrøðr)

Charlatan/anti-client (Ved. Dasyus [√*sarp*], OAv. Karapan and Usij) ←
CLIENT-PATRON → Cheapskate/anti-patron (Ved. Vala, Paṇis [√*rod*])

Since we may assume clients (= hired poets) to have been particularly responsible for crafting and creatively reshaping the myths with which we are concerned here, it seems consistent to assume that the rhetorical ingenuity with which the monster is made to traverse the whole social spectrum of an intruding guest, a bad host, a stingy patron and a malicious client (= competitor of another client) (see below the serpentine Vedic Dasyus, and the Avestan Karapan and Usij) also conformed to certain priestly interests. We can imagine a straightforward admonition of the following kind to have been variously encrypted by priestly clients through the medium of poetry and myth: *Beware, o patron, of leaving to others the fashioning of your good reputation as a host,*

and beware of leaving me (your client) without a generous fee. As I intend to show in the following, many of the poetic statements involving monsters and cattle among archaic speakers of IE can be effectively decrypted along these lines.[3]

3. Basic features of the tricephalus myth

It is reasonable to assume that the speakers of CIE already made references in their oral poetry to a myth involving a heroic figure killing a tricephalic, cattle-stealing monster in some far-off region. The myth can be reconstructed on the basis of its non-trivial linguistic realization in Vedic (Indra [or Trita Āptya] killing [or carrying off cattle from] the three-headed Viśvarūpa [e.g. 10.8.9]), Avestan (Θraētaona killing Aži Dahāka), and Greek (Herakles killing Geryon/Geryoneus) (Hes. Theog. 287–294 and fragments of Stesichorus's *Gēryonēís* [SLG 13,4; 14,8] [see Figure 1]). Diagnostic traits in what seems to be a Latin rendering of an otherwise unknown Greek version of the Geryon myth (Hercules killing Cacus) suggest the myth's close proximity to another narrative complex in Greek and Indo-Iranian involving the hiding, tracking and exchange of cattle in its capacity of a sacrificial fee.[4]

In the Avestan version of the myth (Yt. 5.33–5.35, 15.23–15.24; Y. 9.7–9.8; Vd. 1.18), the name of the adversary conquered by the hero

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[3] One is reminded here of what could be provisionally referred to as the *paradox of encryption in myth*. While myths are cross-culturally recognized as narrative representations of things and events apart from how they ostensively appear in real life, they will inevitably arouse the suspicion of speaking covertly about certain overt real-life concerns. Processes of encryption tend to leave behind traces of encryption.

[4] It has long been noticed (see the entry "Cacus" in RE) that features that appear to reveal an ancient Italic origin of the Hercules/Cacus myth may turn out to be false, because the whole story was assumedly nothing but a relatively late transference of a Greek Herakles adventure onto Roman soil, and under a Latin caption. Nevertheless, some of the motifs in the Hercules/Cacus myth are not found in earlier Greek accounts of the Herakles/Geryon myth – the cave and boulder, the inversed tracks – but rather in the story of Hermes's cattle-theft (HomHerm and Eur.). This coincidence could either indicate that the Cacus myth was simply a relatively late bricolage of various disconnected literary traditions, or it could testify to an otherwise lost oral tradition according to which these motifs were still interconnected. The Cacus myth is the only classical example to associate the semiotic motif of the inversed trail – a trick otherwise attributed to the god Hermes in the Greek myth – with that of a monstrous cattle-thief. A third variation on the theme is found in Vedic renderings of the Vala myth (see below), according to which the track-seeking Aṅgirases retrieve cattle from a monstrous cattle-thief.

Figure 1. Heracles and Geryon. Depiction on a Chalcidian amphora produced in Calabria (c. 530 BCE), Cabinet des Médailles, Paris (De Ridder.202) with painted inscription: ATHENAIE, GARUWONES, HERAKLES. Photo: Serge Oboukhoff / BnF-CNRS-MSH Mondes © License: CC BY-NC.

Θraētaona significantly combines a serpentine appearance (*ažī-*) with an attribute (*dahā-*) originally intended to emphasize its out-group ethnic appearance.[5] The correlation is equally pertinent in Vedic, where *dāsá-* or *dásyu-* (see also the neutral sense of YAv. *daxiiu-* 'inhabitant [of a land], people') – the terms often occur in opposition to *aryá-* – denotes not just any kind of demon but more precisely a stranger not (or at least *not yet*) qualified to become an Aryan guest-friend. In spite of the lack of a direct match in Vedic (**áhidāsá-*), a combination of the two elements to suggest a "serpentine barbarian" in various Iranian traditions can be correlated with a class of beings (the snake [*áhi-*] and the *dāsá-/dásyu-* [see 6.45.25 below]) all subjected to the positively encoded violence of the god Indra in Vedic.

[5] A possible early depiction of the figure is found on the late second-millennium BCE golden bowl of Hasanlu (see Figure 2). This represents a heroic (?) figure attacking a throned opponent and a scaled, tricephalic monster.

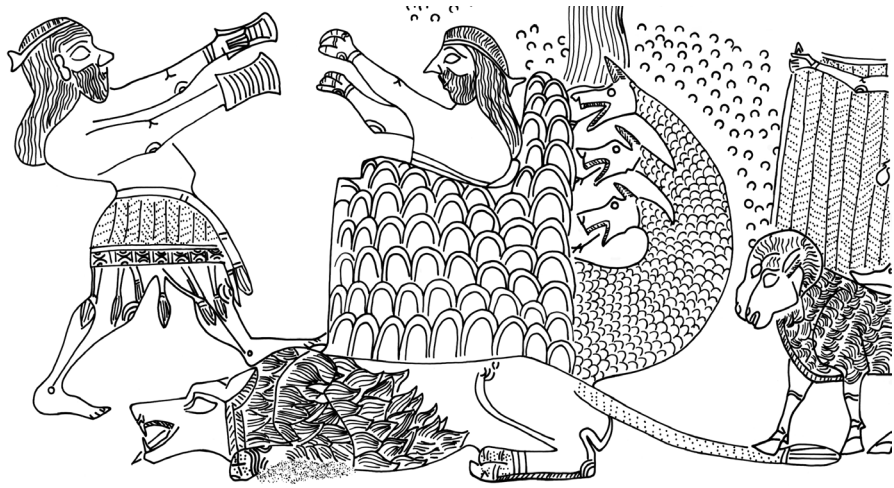

Figure 2. Depiction on the golden bowl of Hasanlu (detail), north-west Iran (late 2nd millennium BCE). Image 96557, courtesy of the Penn Museum © License: CC BY-NC.

In order to better grasp the focal message of the myth, it should be added that a combination of derivatives of either of the nouns PIE *$*g^{w}\acute{o}ws$* 'cow' or *$*óg^{wh}is$* 'snake'(or an analogous adversarial being) with a verb reflecting PIE *$*g^{wh}en$* 'slay' can be arranged in contrastive clusters on the primary basis of Indian, Iranian, Greek and (perhaps) Celtic evidence.[6] This contrastive logic presupposes an underlying notion of the cow as the ultimate token of wealth in the sense of that which is *not to be killed* or destroyed, and the snake as the reversed token of that logic (the obstacle to, withholder or snatcher of wealth) in the sense of what rather *ought to be killed* and destroyed.

Ved. *ághnyā*-, OAv. *agəniiā*- 'cow'
?Gr. ἄφενος 'revenue, riches, wealth, abundance (< 'cattle' [?])'
PII *a-ghn-$i̯ă$-'cow' (lit. 'not to be slain')

Ved. *go-hán*- 'cow-slaying'
Gr. βούφονος, βουφόνια 'id.'
?OIr. *bóguine* (reformed) 'id.'

[6] A verbal phrase *ἔπεφνεν ὄφιν remains so far unattested in Greek in spite of its apparent echoes in phrases and compounds such as ἔπεφνεν Χίμαιραν, κτεῖνε ὄφιν, ὀφιοκτόνος, and δρακοντοφόνος (see Watkins 1995: *passim*).

Ved. *áhann áhim* etc. 'he (Indra) slew the serpent'
Ved. *ahihán-*, *dasyuhán-* (e.g. 6.45.24: "For the smiter of Dasys [*dasyhā́*] will certainly go forth to somebody's cattle enclosure [*gómantam*]; with his [= Indra's] powers he will open it up.")
Gr. ἔπεφνεν Χίμαιραν, Γόργονα (δρακόντων φόβαισιν) 'he slew the Ch., G.' etc.
Gr. κτεῖνε ὄφιν (*ἔπεφνεν ὄφιν) 'he slew the serpent'
Gr. ὀφιοκτόνος 'serpent-killer' (Eust. 183.12), δρακοντοφόνος 'dragon-killer' (*ὀφιοφόντης, *ὀφιοφόνος)

A comparison between these contrasting phrases and compounds yields the following social message:

KILL CATTLE (= negative, murderous)

KILL CATTLE THIEF (= positive, heroic)

In noting the basic features of the IE tricephalus myth, Watkins (1995: 468) transcribes the formulaic semantic structure underlying the Graeco-Indo-Iranian variants as follows:

HERO (variable), SLAY (*$g^{wh}en$), a MONSTER (*$óg^{wh}is$, not in Greek) who is THREE (**tri*)-HEADED (variable) and SIX (**sweks*)-EYED (*h_3ok^wp, not in Greek), with the aid of a GOD (variable). As a result HERO DRIVE OFF (*h_2ag^w, replaced in Greek by ἤλασε) MONSTER's COWS (*$g^wṓs$, replaced in Avestan by WOMEN)

I prefer a slightly modified version:

HERO, SLAY, a MONSTER who is preternaturally THREEFOLD (+ variants × 2, × 3 = (**tri*/**sweks*-), HERO DRIVE OFF MONSTER's unlawfully claimed MOVABLE PROPERTY

My reason for suggesting this slight adjustment is twofold. (1) While the preternatural anatomy of the monster could apparently vary (according to a simple arithmetic involving the number three) within a single tradition (e.g. Geryon), it seems unnecessary to specify these anatomical features in too rigid a fashion. In terms of mythical imagination, it seems perfectly apt to represent a preternatural monster as the one-eyed, six-eyed, three-headed or nine-headed odd one out in a natural fauna dominated by pairs and quadruples.

(2) I am exchanging the parameter CATTLE for MOVABLE PROPERTY so as to provide a more flexible codification of the myth in

its Lévi-Straussian sense of a "sum of its variants." I see no reason why LIVESTOCK, or even PROPERTY in general, should be considered secondary variants of a primary reference to cattle. The social message would easily pertain to all tangible things (including enslaved humans) that may come under the threat of someone else's proprietary claims.

4. Agonies of the cattle-thief: the cases of Geryon and Vala

Heracles's killing of Geryon is described by Stesichorus in the following metaphorical terms (SLG 15 ii 14–17):

ἐμίαινε δ' ἄρ' αἵματι πορφ[υρέωι
θώρακά τε καὶ βροτόεντ[α μέλεα·

ἀπέκλινε δ' ἄρ' αὐχένα Γαρ[υόνας
ἐπικάρσιον, ὡς ὅκα μ[ά]κω[ν
ἅτε καταιχύνοισ' ἁπαλὸν [δέμας
αἶψ' ἀπὸ φύλλα βαλλοῖσα ν[

And (the arrow) stained with dark-red blood
his breast plate and gory limbs.

Geryon let down his neck
to the side just like when a poppy,
shaming its tender body,
drops it petals at once.[7]

While the image of a tree or plant shedding its leaves is a recurrent elegiac feature in Greek and Latin poetry (e.g. in Homer and Ovid), it may appear surprising to find such delicate evocations of grief and pain in the context of a dying monster. Page observed that Stesichorus seems to have portrayed Geryon as a "noble and sympathetic person." (Page 1973: 150). Watkins follows Page in noticing Stesichorus's sympathetic portrayal of Geryon in these terms, commenting on the crucial passage SLG 15 ii 14–17 that "(w)e are a long way from a monster, and a long way from the topos of the adversary felled by the hero like a great tree." (Watkins 1995: 466) (Figure 1). On closer inspection, this unexpected sympathy for the monster should not be seen as an idiosyncrasy

[7] I follow the translation in Franzen (2009: 70) save for a few changes of word order intended to accommodate the metrical segmentation of the edited Greek text. I have omitted dots under letters that mark faint letters in the papyrus.

peculiar to Stesichorus. Vedic Vala, another cattle-stealing creature (see below), is depicted in similar elegiac terms at the moment of lamenting his lost cows:

> RV 10.68.10:
>
> *himéva parṇā́ muṣitā́ vánāni | bṛ́haspátināk̍payad való gā́ḥ*
>
> As the woods (lament) their leaves stolen (pp.) by cold, Vala lamented (ipf.) for the cows (stolen) by Bṛhaspati.[8]

Notice the nicely devised elliptical figure, omitting one of the key verbs in each hemistich.

Similarly, in the preceding hymn, it is said of Indra that "he made the Paṇis wail (*árodayat paṇím*): verily he stole the(ir) cows (*ā́ gā́ amuṣṇāt*)" (10.67.6). To this example one might add yet another: the Anglo-Saxon case of the monstrous anti-guest Grendel's miserable suffering ("he endured sorrowfully" [*earfoðlīce* […] *geþolode* [86–87]) at the sound of rejoicing in Hrothgar's mead hall (86–103).

As these discrete cases all seem to suggest, the ambiguity of the monster should not just be understood as a matter of its preternatural appearance but also as a potential invitation to sympathy. This is a delicate reminder of the monster's cultural and emotional proximity to the in-group, both in the cynical sense of someone (or rather *something*) acting as an impostor, and in the tragic sense of an ill-fated outcast who ultimately deserves recognition and remedy.

5. Versions and inversions of the Vala myth

It is plausible that the professional poets of various IE tribal groups were prompted by a shared tradition to invent their own textualized persona in an ongoing interaction with certain mythical role models.[9]

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[8] This and the following translations from the RV are all based (with the exception of a few minor deviations) Jamison/Brereton 2014.

[9] Skjaervø (2015) rejects Zarathustra's historicity on the grounds that this character, from the perspective of the earliest Gāthic compositions, has already received the mythical status of a first poet-sacrificer on a par with figures such as Vedic Manu and Vivasvat. Yet the same can be said of a figure like Vasiṣṭha (cf. Gotō 1997), who eventually became canonized as one of the seven sages (*saptarṣī*). At one stage or another in the process of textual accumulation, the caption "Zarathustra" will nonetheless only begin to make sense as a cover-term representing a distinct

This creative process of confabulation makes it difficult to tell the hen apart from the egg. A "textualized existence" (*Zitathaftes Leben*) can be understood in these circumstances as a means to creatively translate a familiar repertoire of mythical motifs into living practice, and to enhance the role of the poet-sacrificer as a mediator between gods and men.[10] Conversely, this process would also cause the mythical repertoire to be continuously enriched and expanded as the inventions of singular poets eventually received a semi-canonical status beyond the horizon of living memory.

Such a strategy is clear from the verbal realization of the Gāthic strophe Y 44.20, which apparently borrows its poetic building material from the hymnic realization of an ancient myth. The strophe marks the end (and summary statement) of the so-called *Questions to the Lord-Gāthā*, with its otherwise recurrent pattern of cosmological questions and answers, all of which seem to gravitate towards a final and more hands-on approach to the expected quantity of the poet-sacrificer's ritual fee ("Shall I deserve that prize [*mīžda-*] […] ten mares with a stallion" [18]. By combining no fewer than six lexical items recurrent in Vedic allusions to the so-called Vala myth, the strophe ingeniously echoes a familiar plot of previous hymnic performances through a consistent reuse of the poetic vocabulary (see Jackson 2014a). These verbal echoes suggest that the author of the Gāthic strophe was familiar not just with the plot of the Vala myth (see above) but also with the verbal characteristics of its performance as evidenced by the RV versions. In recognizing how the Gāthic strophe systematically inverts the underlying logic of the Vala myth, furthermore, we are better equipped to elucidate the subtext of the Vedic (and to some necessary degree Indo-Iranian) myth: what superficially appears as the story about a primordial cattle-raid now rather turns out to be a myth about the proper performance of (and expected recompense [the so-called *dákṣinā-*] for) ritual services. Hence, the familiar myth could be variously explored and exploited as a rhetorical device linked to the precarious situation of competing traders in ritual.

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tradition of ritual poetics, just like the captions "Homer" or "Orpheus" may have served as generic markers of epic and melic poetry in the archaic Greek tradition.

[10] The concept of *zitathaftes Leben* was first used by Thomas Mann in his *Freud-Rede* from 1936. It was meant to capture the sense of an artist's life lived according to a preconceived literary pattern that could be mistaken for a secondary, merely literary add-on to the biographical narrative.

According to the Vedic versions, cattle is kept by monstruous creatures (Vala or the Paṇis) within a cave or rock, whereupon the cows are ritually "sung out" from the cave by priestly figures (the Aṅgirases), assisted by the god Indra. In the Gāthic strophe, however, it is now rather the protagonist poet-sacrificers of the Vedic (and supposedly pre-Gāthic) versions who appear in the roles of malicious sacrificers:

44.20: *ciθənā mazdā # huxšaθrā daēuuā å̊ŋharə*
aṯ īṯ pərəsā # yōi ***pišiieiṇtī*** *aēibiiō kąm*
yāiš gąm ***karapā*** *#* ***usixščā*** *aēšəmāi dātā*
yācā ***kauuā*** *# ąnmənī* ***urūdōiiatā***
lnōiṯ hīm mīzən # ***aṣ̌ā*** *vāstrəm frādaiṅhē*

Have there ever been Daēvas of god rule, O Wise one?
But let me ask that (of those) who block (alt. shall hold back) pleasure, in accordance with those (words)
with which the Karapan and the Usij [*usixščā*] seize the cow for wrath(ful) (treatment)
and with which (wrath) the Kavi [*kəəuuā*] makes (the cow) weep in her soul.[11]
They do not foster her (the cow) to promote the (herds in) pastures with truth.

Consider the concordances between the strophe Y 44.20 and hymnic realizations of the Vala myth throughout the RV:

RV: *uśij-*
The Aṅgirases or Uśijas have tracked down and released the cows.

Y 44.20: *usij-*
The Karapan and the Usij have seized the cow for wrathful treatment.

RV: *kávi-*
The Aṅgirases or Uśijas bear the title *kávi-* (e.g. 2.23.1 and 2.24.7). The most prominent representative of their group, Bṛ̊haspati, is even "most kavi of kavis" (*kavítamam kavī́nām* [5.42.3a]).

[11] I follow the 1991 translation of Humbach, Elfenbein and Skjærvø with the exception of the crucial fourth stanza (*yācā kauuā…*). The locative singular *ąnmənī* (instead of the lectio difficilior *ąnmənē* [dative singular] preferred by Humbach et al.) is the reading of the manuscript K_4. Duchesne-Guillemin (1948: 209) maintains here what seems to me the better rendering ("le faire gémir en son âme") in accordance with previous suggestions by Nyberg and Lommel.

Y 44.20: *kəəuuai-*
The Kavi causes the cow to wheep in her soul.

RV: *ṛtá-*, *ṛténa*
The Aṅgirases or Uśijas possess truth (*ṛtá-*), destroy falsehood (*drúh-*) and split open the cave "by means of truth" (*ṛténa*) (e.g. RV 4.3.11).

Y 44.20: *aša-*, *ašā̰*
The Karapan, the Usij and the Kavi do *not* foster the cow to promote herds in the pasture "with truth" (*ašā̰*).

RV: *√pī* (→ *gó-*, *dákṣinā*)
The cave of Vala is 'defying' (*pī́yatas* 10.68.6a), i.e. it holds the cows (= *dákṣinā*) back from their legitimate owner. Cf. 10.28.11b: "those (patrons) who protest against rewarding (*pratipī́yanti*) the priests with food."

Y 44.20: *paēš/piš* (or *pai/pī*) (→ *kąm-*, *mīzda-*)
The Karapan, the Usij and the Kavi 'block' (*paēš/piš*) or 'defy' (*pai/pī*) pleasure (*kąm-*).

RV: *√rud*, *árodayat* (causative)
Indra releases the cows, thus making the Paṇis weep (*árodayat*) (RV 10.67.6).

Y44.20: *raod/rud*, *urūdōiiatā* (causative)
The Kavi makes the cow weep (*urūdōiiatā*) in her soul.

6. Further malicious clients

RV 8.14 begins with the poet's indirect address to his patron in anticipation of a generous fee: "Indra, if I, like you, were, all alone, lord over goods [*íśīya vásva*], my praiser would have cows as his companions." Towards the end of the same hymn, the poet passes on from references to more familiar exploits of the god Indra (the splitting of the Vala cave [7–9] and the decapitation of Namuci [13]) to a less familiar story about a group of Dasyus who used their deceitful *māyā́-* in order to conquer heaven.

8.14.14:

māyā́bhir utsísṛpsata | índra dyā́m ārúrukṣataḥ | áva dasyūm̐r adhūnuthāḥ ||

> They who, through their viles, were trying to creep [*utsísṛpsata* [√*sarp*]] up and mount to heaven, Indra, those Dasyus did you send tumbling down.

The theme of deviant ritualism continues in the final strophe with its reference to Indra making "the non-(Soma)pressing community" (*asunvā́m* […] *saṃsádaṃ*) vanish away in all directions. The curious detail signalled by the verb *sarp-* adds a serpentine feature to the Dasyus, which can be considered to vaguely echo the Avestan epithet Aži Dahāka. Another noteworthy context for the focal noun *māyā́-* is suggested by the rare compound *áhimāyā-* (e.g. RV 6.52.15), 'snake-sly' according to Jamison and Brereton. It is a term likely to be taken here (and elsewhere) in the general sense of aberrant ritual practices through which foreign groups could be identified by their out-group allegiances (*their* malignant sorcery vs. *our* pious religiosity). It would even seem plausible that the itinerant ritual specialists of early (pre-canonical) Vedic society could have used the noun *māyā́-* as a denigrating characterization of competing ritual communities within their own society.

7. Milk-stealing agents in Scandinavian folklore

The hyperbolic representation of cultural others as preternatural monsters in ancient IE traditions can be effectively compared with recent folkloristic accounts of milk-stealing creatures in various parts of post-medieval Europe without the insistence on any significant shifts in the underlying sociocultural message (cf. Ermacora 2017: 70). This circumstance alone does not prove much but it does testify to the tenacity and suggestiveness of a pastoral ideology that was already pertinent among the earliest speakers of IE. Consider, for instance, the following paragraphs from Gunnar Olof Hyltén-Cavallius's pioneering work *Wärend och Wirdarne: Försök i svensk etnologi* (published between 1863 and 1868):

> If we are now to examine the attitude towards the ancient trolls that has long been common in the lands of Wärend and Gothia, it is clear that they have been perceived as an alien race, which no longer counted as "folk," "Christian folk," and whose ethnonym, Troll (n.), does not even have a gender. We must conclude from this that the trolls have had a different nationality separate from ours, with a foreign appearance, language, habits, and customs. The same applies in an equal or even higher degree to their religious practises and conceptions, which were regarded with the utmost contempt

> by the new tribes, and summed up in the word *Trolldom* ("witchcraft"), – a word which has been derived from the ethnonym Troll, and which according to its derivation signifies the customs, traditions, and general essence of this people […] to *kusa* or take advantage of someone else's cattle, guns, fishing tools, farmland, baking, brewing etc. and "to snatch from the neighbours a portion of the cattle's milk." The latter could be done by various means but most prominently through so-called mountain-hares, troll-hares, milk-hares, which were sent by the witches to suck the peasants' cows. The mountain-hares were manufactured during the holy week by sticks, burnt in both ends, and thrown on the floor by the witch. There were also so-called Milking-sticks, which were milked by the witches.[12]

A more recent instantiation of this popular imaginary is Fritz Hippler's infamous propaganda film *Der ewige Jude* from 1940. Jews are depicted here as the progeny of an essentially evil race, adopting the clothing and manners of the German bourgeoisie in an attempt to parasitically exploit a superior civilisation from within. They are also represented as engaging in cruel and deranged religious practices in the form of ruthless routines of ritual slaughter and repetitive balderdash.

8. Concluding remarks

The logic of socio-economic reasoning from which these discrete topics of myth derive their ultimate raison d'être could of course prove viable without the insistence on some distant common heritage. Nevertheless, if there is enough cumulative linguistic and archaeological evidence to support the existence of such a cultural ancestry, and not least so if there

[12] Granska vi nu det förhållningssätt om de forntida trollen, som i Wärend och i Göta rike af ålder varit gängse, så framgår såsom bestämdt givet, att de varit betraktade såsom ett främmande slägte, hvilket icke räknades till »folk», »christet folk», och vars etniska namn, Troll, i språket icke ens har något genus. Vi måste häraf ledas till den slutsatsen, att trollen varit af en från våra förfäders skild nationalitet, med främmande utseende, språk, lefnadssätt och seder. Detsamma gäller i lika eller ännu högre grad om deras religiösa bruk och föreställningar, vilka av de nya stammarne betraktades med den yttersta avsky och i språket sammanfattades med ordet *Trolldom*, – ett ord, som blifvit bildadt ur sjelfa folknamnet Troll, och enligt sin härledning betecknar detta folks seder, bruk och väsende i allmänhet (§26, p. 111) […] att kusa eller taga nyttan av andras kreatur, skjutredskap, fiskdon, åkrar, bak, brygd o.s.v. samt »förtaga grannarne en del af boskapens mjölk». Det sednare skedde på flera sätt, men förnämligast genom s.k. Bjergaharar, Trollharar, Mjölkharar, hvilka af trollpackorna utsändes för att dia böndernas kor. Bjergahararne förfärdigades i dymmel-veckan af stickestubbar, brända i begge ändar, hvilka af trollqvinnan kastades på golfvet. Äfven förekommo s.k. Mjölk-käppar, som af trollkärringarne mjölkades. (p. 115)

is additional evidence to support the existence of culturally contiguous tribal communities in which such a pre-ancient sociology would have made perfect sense, then we should remain open to the possibility that it was precisely among these tribal groups that this logic of reasoning developed its first rudimentary characteristics. The semi-nomadic pastoralists of the Pontic-Caspian steppes fit neatly into this framework. Furthermore, we should take into account the possibility that the notion of the parasitic monster initially set a precedent for (or at least accompanied, justified, extrapolated etc.) certain forms of organized behaviour, such as the extension of frontiers and the exploitation of outgroup communities in order to increase wealth and prestige, that may have appeared both redundant and inhumane among sedentary farmers and small-scale bands of hunter-gatherers. Such a reorientation of interest can only be fully grasped in view of certain basic conditions of ecological affordance. There were surely prehistoric and pre-ancient societies in which a cultural preference for such forms of symbolic and material excess would either have had devastating consequences (see also the so-called "Easter Island Syndrome"), or simply appear too costly in the first place.

Addenda: Serpentine dead ends? Illuyanka and the Gallehus tricephalus

Addendum 1

It would be opportunistic to address the pre-ancient paradigm of monsters in the context of defunct commensality without touching upon the Hittite story of the Storm-god, the goddess Inaras, and the serpent Illuyanka in the mythological fragments from the archive in Boğazköy (Esp. KUB XVII 5; KUB XVII 6):

> Inara dressed herself up and invited the serpent up from his hole (saying): "I'm preparing a feast – come eat and drink!" / Then the serpent came up together with [his children], and they ate [and] dra[nk] up every vessel and were sated. / They were no longer able to go back down into [their] hole, [so that] Ḫupašiya came and tied up the serpent with a cord. / The Storm-god came and *slew the serpent* [*kuenta illuyankan*]. The [other] gods were at his side. [§§9–12]) (tr. Beckman 1982)

There are a few details in this narrative that fit well into the mythological pattern of the IE cattle-stealing monster: a semi-cultivated, preternatural

(serpentine) guest/stranger subjected to violations of hospitality. Also, the Hittite storm-god is depicted as killing the tied-up serpent through the use of a verbal formula that many Indo-Europeanists now identify as the most emblematic feature of the IE dragon/monster-slaying myth (= HERO SLAY [$*g^{wh}en$-] SERPENT).

Such analogies notwithstanding, the perceived Indo-European background of the Anatolian Illuyanka myth may prove misleading. Consider, especially, Norbert Oettinger's recent call for hesitation:

> He (Watkins) assumed that the sentence 'The Storm God killed the Snake' […] was the old wording of the Proto-Indo-European dragon slayer myth, but the only formal congruence is the word for 'kill' itself, and this congruence is better explained by chance. The true Proto-Indo-European myth, preserved in Vedic, Avestan and Greek mythology, deals with the killing of a dragon that is characterized by three heads, six eyes and the possession of cattle. These specific features are missing in the myths of Illuyanka; specific Oriental features being found there instead. (Oettinger forthcoming, 3).

Oettinger's critique is informed by a justified scepticism about the idea that the myths adopted in the official Hittite cult, which was clearly dominated by Hattic tradition, had a PIE provenance: "So far no myths of evident Proto-Indo-European provenance have been found in the corpus (i.e. of Anatolian myths) although they probably existed somewhere but were not adopted in the official Hittite cult that was dominated by Hattic tradition." (p. 1).

Even if the Hittite mythological corpus need not have been exclusively Hattic in origin, it seems to consist of translations (or transnarrations) of myths that were all generically linked to the cuneiform scribal milieus of Mesopotamia and Asia Minor. An analogous case would be that of Roman mythology, which depended almost exclusively on Greek literary culture, whereas the (no doubt once extant) stock of indigenous Italic mythology *stricto sensu* was reworked by Roman annalists from the second century BCE onwards according to the pattern of *ab urbe condita*, that is, to an all-inclusive narrative about the founding and early history of Rome.

Addendum 2

Among the enigmatic figurations on the fifth-century CE lesser horn (B) from Gallehus, the representation of a tricephalic humanoid with an axe and a tethered horned (and bearded!) animal has suggested to some

scholars (e.g. Lincoln 1976: 58) an otherwise unattested Germanic reflex of the PIE/CIE tricephalus myth (Vedic [Viśvarūpa RV 10.8.9]; Iranian [Aži Dahāka], and Greek [Geryon/Geryneus]). I believe that this suggestion has to be treated with caution.[13] And yet a few philological and iconographic observations might be adduced in its support.

The obsolete Old Norse myth of Þórr and Þrívaldi is only very briefly alluded to in two isolated Skaldic fragments – one from the tenth-century Icelandic skald Vetrliði Sumarliðason and the other from the ninth-century Norwegian skald Bragi inn gamli Boddason (fr. 3). A first observation to be made in regard to these fragments is that they both take the otherwise rare form of direct (cultic/hymnic) address to a god, namely Þórr. This unusual feature could indicate a deviation from the familiar poetic genre in other respects as well. The addressee in early Skaldic poetry is usually a chief and/or patron (as in Bragi's *Ragnarsdrápa*), whereas gods in both Skaldic and Eddaic poetry are typically referred to in the third-person narrative mode. Vetrliði's strophe simply states that "you (= Þórr) thrashed/made lame (*lamði* [*lemja*]) Þrívaldi." Bragi's strophe begins with a kenning (*sundrkljúfr níu hǫfða Þrívalda* ["cleaver asunder of the nine heads of Þ."] = Þórr). This reference could be taken either at face value or as a reference to a feat of Þórr in another myth than the one alluded to in the fragment (as seen elsewhere in Bragi's poetry [e.g. "the terrifier of Ǫflubarði [= Þórr] lifted the hammer in his right hand, when he recognized the boundary-saithe of all lands [= Miðgarðsormr]"]). In either case, however, the kenning is self-explanatory in so far as it identifies Þrívaldi ("the One three times mighty") as one of Þórr's canonical adversaries. Þrívaldi was most likely a *jǫtunn* conceived as a creature with nine heads, or possibly as a tricephalic creature thrice killed by Þórr (cf. Simek 1993: 328).

A similar variation on the theme of threefold anatomy (3, 3×2, 3×3) can be observed in the stories both of Geryon (one body and three heads, three bodies and one head, six eyes, etc.) and Aži Dahāka (three heads and six eyes). Interestingly, Bragi's strophe praises Þórr for having "well driven back your draught animals (*eykjar* [sg. *eykr*] = Þórr's two goats?) (*Vel hafið yðrum eykjum aptr* […] *haldit*) […] from/above the famous drink-provider of the drinking party" (*of mærum simbli sumbls* = either Þrívaldi or some other giant [Ægir?]). According

[13] It should be added that Bruce Lincoln would now most likely agree on this in consideration of his increasingly sceptical attitude towards the reconstruction of an Indo-European cultural heritage.

to the most common interpretation, the implied sense is that Þórr drove home over the sea. The ancient sea-god/*jǫtunn* Ægir is occasionally referred to in Old Norse poetry and prose as the host of a large drinking-feast, the so-called *Ægisdrekka*. A less commonplace interpretation of the strophe would be to bypass the classical function of kennings, taking the *mærr simblir sumbls* as a direct reference to Þrívaldi, and the fragment as a whole as a pre-classical allusion to a myth in which Þórr retrieves his two goats from a nine-headed (or thrice-killed three-headed) giant who had stolen them from him in order to arrange a "drinking-feast" (*sumbl*). This last possibility might gain some ground in view of the following observations.

Snorri's story of how Þórr acquired his servants Þjálfi and Rǫskva (ch. 44) somewhat strengthens the assumption not just that the god's two draught animals were considered worthy topics of myth but that their function in myth could involve Þórr as a provider of food in a typical guest–host situation. Since the stories both of Ægir's drinking-feast (st. 1) and the paralysed buck (st. 37–38) are alluded to in the Eddaic poem *Hymiskviða*, it ought not to be ruled out that these stories once formed parts of a continuous whole rather than representing a relatively late patchwork of once unrelated narratives. Observations along similar lines are made by Edith Marold in her analysis of the Gotlandic picture stone from Ardre VIII (Marold 1998). Furthermore, there is indirect support for the notion of a giant feasting on a goat's meat in a kenning for TANNER preserved in one of Þjóðólfr Arnórsson's *Lausavísur* (5): "proud giant/(eater [?]) of the goat's meat" (*hǫldnum jǫtni kjǫts hafra*). Þjóðólfr's extemporaneous strophe depicts the quarrel between a blacksmith and a tanner by presenting the antagonists in the context of Þórr's (= the blacksmith's) encounter with the giant Geirrøðr (= the tanner). Since the noun *jǫtunn* is usually assumed to be derived from the PGmc. verb **etaną* 'to eat', it is possible that the etymological sense was still perceptible by the late tenth century so that the noun could have functioned as an agent noun.[14]

While the recursive use of a mythological kenning may seem unwarranted at first glance (e.g. in Clunies Ross's sceptical words: "[i]n spite of the direct address, the stanza [Bragi, fr. 3] itself is unlikely to be part of a telling of that myth." [Clunies Ross 2017]), it could also be taken to represent an archaism on a par with the unexpected use of

[14] For further thoughts on the overlapping semantics of PGmc. **etunaz* and **gastiz* (≈ "eater" → "stranger with whom one shares a table"), see Jackson 2014b.

direct (hymnic) address. For further support, consider the early example of Vedic poetry: "With your mace as Vr̥tra-smiter [*vájrena hí vr̥trahā́*] you [Indra] laid Vr̥tra low [*vr̥trám ástar* [√*star*]]" [10.111.6a]; "Smash obstacles, o smasher of obstacles" [8.17.9c]).

Lastly, it has so far gone largely unnoticed in the iconographical discussion of the lesser Gallehus horn that the tricephalus – at least to judge from J. R. Paulli's 1734/1735 drawing of the now lost artefact – represents a figure with a few conspicuous markers of ambiguous gender such as breasts and vulva (?), necklace and an axe (see Figure 3). This could

Figure 3. Snakes and tricephalic monster with an axe and a tethered horned animal. Eighteenth-century rendering of a depiction of the fifth-century CE lesser horn (B) from Gallehus. Photo: Malene Thyssen. From: Wikimedia Commons. License: CC-PD.

be understood as an emphasis of preternatural disorder by contrast to the typical features of a classical monster-slayer, who rather appears as a propagandistic exemplar of order through the promotion of male dominance and virile aggression. Indra's monstrous opponents are sometimes characterized as castrated steers (sg. *vádhri-* [e.g. RV 1.32.7c [of Vr̥tra]]) to match his own appearance as a potent bull (*vr̥ṣan-*).

Transgendered imagery may also be associated with the three-headed Viśvarūpa, who (unless v. is to be taken here as a modifier of *vr̥ṣabháḥ* rather than a proper noun) is said to be a bull and to have three udders and offspring in great quantity (3.56.3) (see Schröder's [1955] discussion of this strophe in his comparative-mythological reading of the Eddic poem *Hymiskvða*). According to the fascinating interpretation suggested by Joshua Katz, furthermore, an obsolete theme of male initiation with apparent connotations to pederastic practices seems to underlie the topos of the paralysed buck's extracted marrow (Katz 2014). While this topos need not have been properly understood by the end of the pre-Christian era, it could still have made sense in the context of early Germanic tribal practices (such as the ones described with disgust by the historian Ammianus Marcellinus in his fourth-century account of the Germanic (or possibly Sarmatian) Taifals [31.9.5]), thus adding yet another dimension to the symbolism of the cattle-stealing monster. It could well be that the shame of emasculation, passive homosexuality and oblique gender was variously imposed on the groups and individuals (real or imaginary, human or monstrous) who were subjected to the fame-winning practices of cattle-raiding, just as it would have applied to the shameful condition of liminality to be overcome by ordeals of heroic confrontation (e.g. the catching of a boar or killing of a huge bear, according to A. Marcellinus's description). The monster can thus be potentially understood as an objectification of that liminal condition.

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5. Churning the ocean of milk – a historical-comparative study of the Indo-European root *$menth_{1/2}$-

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Abstract

In the Indic myth known under the name of *samudramanthana* or *Churning the Ocean of Milk*, attested since the Vishnu Purāṇa and the Mahābhārata, a multitude of mythological motifs have been combined. The present chapter takes up the linguistic foundation for some of these for new consideration, in particular the root *$menth_{1/2}$- 'churn', but also the possible background of the magical Finnish *sampo* in the Kalevala and the Serpent of the Deep.[1]

Introduction

The peculiar idea of a connection between milk and snakes or similar creatures is known from several Indo-European-speaking communities. Either the creature is assumed to suckle the cows, as proved by the inherited word for 'cow-suckler' in the meaning of 'lizard' or 'toad', or humans actively offer milk to house snakes, as is particularly striking in Baltic tradition.[2]

Incidentally, the combination of snakes and milk plays an important role in one of the most popular myths of Hinduism from ancient India to the present day: the *samudramanthana* or Churning the Ocean of Milk, which had the purpose of retrieving the *amṛ́tam*/ἀμβρόσια, the

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[2] See also Ermacora 2017; Jørgensen, this volume; and Larsson, this volume.

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divine drink granting immortality to the gods. In the following, I will discuss in how far this tale is likely to bear traces of Indo-European heritage and, if so, whether we are dealing with an original mythological complex or a later combination of inherited features. The basis of the investigation will be a historical-comparative study of the root *$*menth_{1/2}$- 'churn'.

1. The *samudramanthana*

With some variation, the myth of the Churning of the Ocean first appears in the Purāṇas and in the great epics of the Mahābhārata and the Rāmāyaṇa. The following is an abbreviated version of the Mahābhārata, section 18 (translation by Ganguli 1883–1896):

> There is a mountain called Mandara adorned with cloud-like peaks. […] The gods wanted to tear it up and use it as a churning rod but failing to do so came to Vishnu and Brahman who were sitting together, and said unto them, "Devise some efficient scheme, consider, ye gods, how Mandara may be dislodged for our good."
>
> And the gods came to the shore of the Ocean with Ananta [the celestial snake, lit. 'unending'] and addressed the Ocean, saying, "O Ocean; we have come to churn thy waters for obtaining nectar." And the Ocean replied, "Be it so, as I shall not go without a share of it. I am able to bear the prodigious agitation of my waters set up by the mountain." The gods then went to the king of tortoises [= Vishnu] and said to him, "O Tortoise-king, thou wilt have to hold the mountain on thy back!" The Tortoise-king agreed, and Indra contrived to place the mountain on the former's back.
>
> And the gods and the *Asuras* made of Mandara a churning staff and Vasuki [king of the nagas/serpents] the cord, and set about churning the deep for *amrita*. The *Asuras* held Vasuki by the hood and the gods held him by the tail. And Ananta, who was on the side of the gods, at intervals raised the snake's hood and suddenly lowered it. […]
>
> After the churning, O Brahmana, had gone on for some time, gummy exudations of various trees and herbs vested with the properties of *amrita* mingled with the waters of the Ocean. And the celestials attained to immortality by drinking of the water mixed with those gums and with the liquid extract of gold. By degrees, the milky water of the agitated deep turned into clarified butter by virtue of those gums and juices. But nectar did not appear even then. The gods came before the boon-granting Brahman seated on his seat and said, "Sire, we are spent up, we have no strength left to

Figure 1. The Churning of the Ocean. From: Wikimedia Commons. License: CC-PD.

churn further. Nectar hath not yet arisen so that now we have no resource save Narayana [here also an avatar of Vishnu]."

On hearing them, Brahman said to Narayana, "O Lord, condescend to grant the gods strength to churn the deep afresh."

> Then Narayana agreeing to grant their various prayers, said, "Ye wise ones, I grant you sufficient strength. Go, put the mountain in position again and churn the water."
>
> Re-established thus in strength, the gods recommenced churning. After a while, the mild Moon of a thousand rays emerged from the Ocean. Thereafter sprung forth Lakshmi dressed in white, then Soma, then the White Steed, and then the celestial gem *Kaustubha* which graces the breast of Narayana. Then Lakshmi, Soma and the Steed, fleet as the mind, all came before the gods on high. Then arose the divine Dhanwantari himself [god of medicine, an avatar of Vishnu] with the white vessel of nectar in his hand. And seeing him, the *Asuras* set up a loud cry, saying, "It be ours."
>
> […] But with the churning still going on, the poison Kalakuta appeared at last. Engulfing the Earth it suddenly blazed up like a fire attended with fumes. And by the scent of the fearful Kalakuta, the three worlds were stupefied. And then Siva, being solicited by Brahman, swallowed that poison for the safety of the creation […] Seeing all these wondrous things, the Asuras were filled with despair, and got themselves prepared for entering into hostilities with the gods for the possession of Lakshmi and Amrita. Thereupon Narayana called his bewitching Maya (illusive power) to his aid, and assuming the form of an enticing female, coquetted with the Danavas [a group of demigods associated with the primordial waters]. The Danavas and the Daityas [lower-ranking half-brothers of the devas] charmed with her exquisite beauty and grace lost their reason and unanimously placed the Amrita in the hands of that fair damsel."

2. The root *$*menth_{1/2}$- > *manth*- 'churn' in Indo-Iranian

An essential linguistic element in the evaluation of the myth is the verb used for 'churn'. The Sanskrit root used to denote this process is *manth*- < *$*menth_{1/2}$-,[3] including the following forms in the oldest language:

- thematic present *$*ménth_{1/2}e/o$- > *mánthati* (RV+)[4]
- root aorist → *iṣ*-aorist *$*ménth_{1/2}$-*s*-: only *ámanthiṣṭām* (RV 3.23.2)[5]

[3] *LIV* 438–439, *EWAia* II: 311–312. According to the traditional reconstruction, the root-final laryngeal is *h_2, but*h_1 and *h_2 both seem to trigger aspiration of an adjacent stop see e.g. Olsen 2010: 38–41.

[4] Gotō 1987: 239–240.

[5] Narten 1964: 191.

- causative **month$_{1/2}$-éi̯e/o-* > *manthấyati* 'lets stir (milk)' (sūtras+)
- passive ptc. **mn̥th$_{1/2}$-h$_1$i̯ó-mh$_1$no-* → *mathyámāna-* (RV)
- *to*-participle **mn̥th$_{1/2}$-tó-* > *mathitá-* (RV+)

In the Rigveda, however, the verb is almost exclusively used in the specialized meaning of fire making, especially in Agni hymns, e.g.:

RV 3.29.6 (Agni):

yádi mánthanti bāhúbhir[6]

"when they churn him [Agni] with their arms"

Similarly, RV 6.15.17 (*manthanti*), 6.16.13 (*amanthata*), 3.29.1 (*manthāma*), 3.29.5 (*manthata*), 3.23.2 (*amantiṣṭām*), 5.11.6 (*mathyámānaḥ*), 6.48.5 (*mathitáḥ*), 2.29.12 and 3.23.1 (*nír matithaḥ*), all in hymns to Agni. Further, in the Soma hymn 8.48.6 (*mathitám*) where a comparison is made between the inciting effect of soma and the churned fire.

Another common comparison is that between the kindling of fire and the sexual act, as found in the pregnancy charm RV 10.184.3:

hiraṇyáyī araṇī yáṃ nirmánthato aśvínā

"the one [i.e. the embryo] that the Aśvins churned out of the two kindling sticks"[7]

Occasionally the context is the stirring of soma, thus RV 10.136.7:

Vāyúr asmā úpāmanthat

"Vayu churned it for him"

Here the stirred substance refers to soma mixed with meal = *manthín-*, and the same meaning is also intended in RV 3.32.2 (*manthínām*), and 9.46.4 (*manthínā*) and in the thematic derivative *manthá-* in RV 10.86.15.

The root is the basis of several nominal derivatives. Thus the term for churning stick, *mánthā-* (RV+),[8] and the agent noun for 'crusher',

[6] Translations by Jamison & Brereton 2014.

[7] See also Jamison & Brereton for the more obscure passage of RV 10.24.4.

[8] Continued in Pali *mantha-* 'churning-stick', Marathi *māthā* 'head of a churning stick' etc. (Turner 1966: 565).

mánthitar- (AV).[9] In his capacity of shaker of the universe, Shiva is referred to by the middle participle *manthāna-*. Whereas these derivatives are all found in contexts where a solid substance is involved, others are either additionally or exclusively associated with the churning of milk. This goes for *manthana-* 'kindling fire by friction; churning stick'[10] but also, in the Mahābhārata, 'churning milk into butter, churning out of *amṛta*' in the *samudramanthana*.[11]

A particularly well-attested stem is the participle *mathitá-* 'stirred, churned', substantivized (n) in the meaning 'buttermilk churned without water'. Continuations in Middle and Modern Indic languages include Pali *mathita-* (adj.) 'upset mentally' and (n) 'buttermilk', Prakrit *mahia-* 'churned', Sindhi *mahī* 'sour milk and water churned together, buttermilk', Hindi *mahī* and Nepali *mahi* 'buttermilk', and Oriya *mai* 'sour whey used for curdling' (Turner 1966: 561).

Besides the Old Indic evidence, the verb is continued in Iranian and Indo-Iranian border languages, partly with the meaning of 'churning, making butter' (*KeWA* II: 579; III: 774). Thus, for example, Prakrit *manthaï* 'hits, harms, churns', Shina *manóĭkį̆* 'thresh, churn (buttermilk)' (Turner 1966: 565), OKhot. *maṃth* 'churn, stir', Buddh. Sogd. *mnδ'* 'agitate, stir, churn', Bal. *mant-* 'churn, shake a churn', Oss. *æzmæntun* 'mix, stir' (Cheung 2007: 264).[12]

The Iranian attestations suggest that the use of *manth-* in connection with churning of butter is at least of Indo-Iranian age even if it is missing in the very oldest texts. When the meaning of fire making is so predominant in the Rigveda in opposition to later texts, this is most likely due to the ritual character of the Rigvedic hymns, with their extreme emphasis on Agni and the sacrificial fire. This may be seen in opposition to the more domestic genre of the Atharva Veda, where we find *mathitá-* in the meaning of 'buttermilk' since the supplementary text of the Kauśikasutra.

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[9] AV 8.2.17: *índro manthatu mánthitā* "Indra soll zermalmen als der Zermalmer" (Tichy 1995: 260).

[10] See also Prakrit *maṁthaṇa-* (n) 'churning', (n/m) 'churning vessel', Bashkarīk (Dardic) *madan* 'churning stick', Kashmiri *mandünü* (f) 'ball of butter' (Turner 1966: 565).

[11] See also MBh *manthagiri-* 'churning mountain, the mountain Mandara' and the lexicographically attested *manthódaka-* 'churning water, the ocean of milk' and *manthódadhi-* 'churning-sea, sea of milk'.

[12] From Iranian also, according to Benveniste (1964), NP *būmahan* < **-maβana-* 'earthquake'.

Incidentally, the divergent semantic specializations of a root with an original basic meaning 'grind, stir' make good sense if one considers the technology of the two processes. As described by Jamison & Brereton (2014 II: 503):

> fire was created through friction using a fire drill that consisted of two pieces of wood. The upper fire-churning stick was held vertically with one end in a recessed area in the lower piece of wood which was horizontal. Wood chips were placed around the recessed area on the area of the lower plank. The upper stick was then rotated back and forth like a churn. In the later ritual this is done by wrapping a rope around the upper stick and pulling on one side and then the other to make the stick rotate back and forth. Eventually, enough heat was generated so that the wood chips caught fire.

In much the same way, churning of butter, to this day, is practised by pulling a rope round the churning stick.

Figure 2. Churning butter. From: WebExhibits. License: CC BY-NC.

3. The root *$*menth_{1/2}$*- in Tocharian and its Vedic counterparts

Apart from Indo-Iranian, the root *$*menth_{1/2}$*- (*IEW* 732; Mallory & Adams 1997: 547; *LIV* 438–439) is attested in at least Tocharian, Balto-Slavic and Germanic. More sporadic evidence comes from Italic, and possibly also Greek. The most remarkable similarity with the Vedic verbal complex comes from Tocharian.

Thomas (1987: 173–174) was the first to suggest an equation between Toch.AB *mänt-* and Ved. *ma(n)th-*:

> Vielleicht bietet sich eine Verbindung zu der von J. Pokorny angesetzten Wz. ***menth-**, ***meth-** 'quirlen, drehend bewegen' an, die uns im Aind. in der Bedeutung 'quirlen, rühren, schütteln', aber auch 'hart mitnehmen, aufreiben, klein machen, zerstören, beschädigen, in Unordnung bringen' (PW)[13] u. dgl. begegnet.

Undoubtedly, Thomas's conjecture holds true, and the Tocharian verb not only secures the root for "Indo-Tocharian"', the first node of the Indo-European family tree after the split of Anatolian. It also reveals a remarkable set of morphological correspondences between Tocharian and Indo-Iranian.

In his etymological dictionary, Adams (2013: 486–487) offers the following translation of Toch.B *mänt-*: "'stir (up), remove (utterly) from its place, destroy, pour out'; (middle/trans.): 'move from its place, disturb, meddle with'; (middle/intr.) 'fall into misfortune, be stirred up, be angry, be irritated, feel malice'". He further refers to Malzahn's interpretation (2010: 753–755): "the basic meaning is 'stir' (e.g. 'stir clay'), whence more broadly 'destroy'. In the medio-passive we have the passive 'be stirred, be destroyed' (and 'be deleted') and the figurative 'be stirred up, be angry'".

As pointed out by Hackstein (1995: 29–30), two sets of present stems in Tocharian have exact equations in Vedic:

Toch. *mäntänā-* : Ved. *mathnā-*

Toch. *mäntañ̃ñ-* : Ved. *mathāya-*

[13] I.e. the "Petersburger Wörterbuch": Otto Bötlingk & Rudolph Roth (eds), *Sanskrit-Wörterbuch, herausgegeben von der Kaiserlichen Akademie der Wissenschaften*, 462–465. Sankt Petersburg: Fünfter Theil (1865–1868).

Morphologically, the first set goes back to a simple nasal present **mn̥t-neh$_{1/2}$-*, the second to a derived yod-present **mn̥tn̥h$_{1/2}$-i̯e/o-*, i.e. a pair with the same structure as Ved. *grbhń̥ati* vs. *gr̥bhāyáti* 'grab'.

In an influential paper, Narten (1960) has made it clear that within Old Indic we must operate with two roots, *manth-* 'churn' etc. and *math-* 'seize, steal, rob'.[14] This is indeed an accurate synchronic description. In the latter meaning, the Old Indic root never has an *-n-* on the surface, while the nasal always appears in the Tocharian forms, whether the meaning is 'stir, churn' or 'remove'. However, it is impossible to tell whether an Indic *-a-* in all cases represents an earlier **-e-* or **-n̥-*, and, in fact, there are cases of overlap between forms of the two synchronic verbs, thus the participle *mathitá-* 'churned' or 'stolen'.

Since Narten's investigation, the idea of two originally distinct roots **menth$_2$-* (*LIV* 438–439: 'quirlen, umrühren') and **meth$_2$-* (*LIV* 442–443: 'wegreißen') has been generally accepted. Even Adams (2013: 486–487) and Hackstein (1995: 29–30), while fully acknowledging the striking morphological correspondence between Tocharian and Vedic and the semantic breadth of the Tocharian forms, including 'move from its place' (= Ved. *math-* 'seize, rob, steal'), have deemed it necessary to assume a partial convergence between two original roots in Tocharian.

4. Vedic *manth-* 'churn' vs. *math-* 'steal': the split of a paradigm

Apart from the semantic overlap between Tocharian *mänt-* on the one hand and Vedic *manth-* and *math-* on the other, it is remarkable that the alleged root **meth$_2$-* 'steal' has no convincing cognates in the related languages. *LIV* (442) does adduce Lat. *mandō* 'chew' with reference to Meiser (1991: §236) and Rix (1995: 405), assuming a semantic development "'wegreißen' → '(Beute) reißen' → 'zerfleischen' → 'fressen' → 'kauen'", but this seems quite speculative. A derivation from **menth$_{1/2}$-* 'churn', on the other hand, would be semantically more straightforward; cf. such expressions as 'churning' or 'grinding' one's teeth.[15]

[14] In particular about Mātariśvan stealing the fire from heaven.

[15] De Vaan (2008: 361–362) also favours a comparison between *mandō* and *mánthati*, though his interpretation of PIt. **mand-n-* "to stir > chew" is easier to understand through an intermediate meaning "grind, churn > chew". Hofmann (*LEW* 2: 24) assumed that a root **menth-* 'chew' was possibly, but not certainly identical with **menth-* 'stir', while *IEW* (732–733) stipulates two partly homonymous roots, "**1. menth-, meth-** ‚quirlen, drehend bewegen'" and "**2. menth-** ‚kauen; Gebiß, Mund'".

If *mandō* does belong here, as seems very likely, its morphological analysis is debatable. Starting from **meth$_2$-* without a radical nasal, the Meiser–Rix–*LIV* scenario implies a thematicized nasal present **m$_e$t-n̥-h$_2$-e-* > **matane-*> **matne-* > *mande-*. De Vaan (2008: 361–362), on the other hand, combines the nasal present with a basic root **menth$_2$-* "with a phonetic development as in *pandō*", i.e. **mand-n-* and **pand-n-* respectively, even though the starting points are not quite parallel in so far as the root of *pandō* 'spread out, extend' is **peth$_2$-*, i.e. the only original nasal belongs to the infix. Still, if we assume a proto-form **m$_e$nt-n̥-h$_{1/2}$-e-* > **mantane-*, *mande-* is probably also the expected output. A simpler option is a thematic stem **m$_e$nth$_{1/2}$e-*, with *-a-* as the usual zero-grade substitution. For the Latin verb, we may further include the old comparison with Gk. μασάομαι 'chew, bite' that may reflect a denominative **mn̥th$_{1/2}$-i̯ah$_2$-i̯e-* rather than **m$_e$th$_{1/2}$-i̯ah$_2$-i̯e-* or **math$_{1/2}$-i̯ah$_2$-i̯e-* (see *LIV* 442 and *GEW* 2: 179–180).[16]

As for the Vedic attestations of the verb meaning 'seize, steal', the present (imperfect) stem is either with a nasal infix *mathnā́ti* or the derived type *mathāyáti*, apparently without any semantic difference; see, e.g., RV 1.93.6 (Agni and Soma):

ā́nyám dívo Mātaríśvā jabhā́rāmathnād anyam pári śyénó ádhreḥ

"Mātariśvan bore the one [the fire] here from heaven; the falcon stole the other [soma] from the rock"

beside RV 9.77.2 (Soma):

sá pūrvyáḥ pavate yáṃ divás pári śyenó mathāyád iṣitás tiró rájaḥ

"the primordial one purifies himself – he whom the falcon, propelled across the airy realm, stole from heaven"

As expected, these imperfect stems are connected with a root aorist, thus RV 1.71.4 (Agni):

máthīd yád īṃ víbhṛto Mātaríśvā gṛhé-gṛhe śyetó jényo bhūt

"when Mātariśvan, borne away, stole him, and he of worthy birth came to be gleaming in every house"

[16] Cf. e.g. also Hes. μάθυιαι· γνάθοι.

Similarly also RV 1.148.1 (Agni):

máthīd yád īṃ viṣṭo Mātaríśvā

"since with effort Mātariśvan stole him"

From a root **menth$_{1/2}$-* we should strictly speaking expect a full-grade aorist singular **manthīd*, which is what seems to be the basis of the isolated secondary *iṣ*-aorist *ámanthiṣṭhām* 'churned fire'.[17] Here we would then have the only formal argument in favour of an original distinction between **menth$_{1/2}$-* and **meth$_{1/2}$-*. However, I think it is easy to overcome this difficulty by assuming influence from the morphologically almost identical paradigm of *grabh-* < **g^{h}rebh$_{1/2}$-* 'grab' (*LIV* 201):

gṛbhṇā́ti : *mathnā́ti*

gṛbhāyáti : *mathāyáti*

ágrabhīt : **ámanthīt* → *(á)mathīt*

Apart from the paradigmatic similarity, the meaning of the two roots is practically identical, at least in the aorist, 'grab, snatch'.

Thus, it is possible to simplify the input and dispense with a distinct root **meth$_{1/2}$-*. Apparently, we are faced with a case of *di*vergence in Old Indic rather than *con*vergence in Tocharian.

The original averbo, based on Indo-Iranian, Tocharian and Latin with supplementary evidence from Balto-Slavic, must have been approximately as follows:

- Root aorist **menth$_{1/2}$-*/**mn̥th$_{1/2}$-* → Ved. *mathīt, ámanthiṣṭhām*
- → thematicized present, Ved. *manthati*, Lat. *mandō* (?); also Lith. *(į-)mę̃sti*, OCS *męsti* (see Section 5 below)
- Nasal present: **mn̥t-né/n-h$_2$-* > Ved. *mathnā́ti*, Toch. *mäntänā-*
- Derived yod-present: **mn̥tn̥h$_{1/2}$-i̯é/o-* > Ved. *mathāyáti*, Toch. *mäntaññ-*
- Causative/iterative: **month$_{1/2}$-éi̯e/o-* > Ved. *manthā́yati*, OCS *mǫtiti* 'disquiet' etc. (see Section 5 below)

[17] As noted in *LIV* (439), the full grade (not lengthened grade) in the active speaks against an old *s*-aorist.

- Stative/essive (> passive): **mn̥th$_{1/2}$-h$_1$i̯é/ó-* > Ved. ptc. *mathyámāna-*

Our final problem concerns the meaning: how is it possible for a single root to cover the wide semantic spectrum from 'stir, grind, churn, crush, destroy' to 'steal, rob, remove'? Most likely, this is originally a question of aspect, and here Lat. *mandō* may hold the key to an explanation. If 'chewing, gnawing' is more or less the same as 'grinding, churning', the corresponding aorist must be expected to mean something like 'snapping' or 'snatching', which again is equivalent to 'pinching, stealing' and hence 'removing'. The snatching or stealing of the fire is exactly such a momentary action, and it does not seem unlikely that the Indians themselves were aware of the etymological connection between the two verbs that are so prominent in Agni hymns, describing the two important activities in connection with fire: its ritual grinding and its theft by Mātariśvan.

Thus Narten's tentative comparison between Ved. *math-* 'steal' and Gk. Προμηθεύς, Dor. Προμᾱθεύς (1960: 135; see also West 2007: 272–274) may very well be correct despite the puzzling vowel lengthening in Greek.[18] We can then maintain Kuhn's old etymological suggestion (1859: 12–18), while adjusting – in agreement with Narten – the translation from 'fire-driller' to 'fire-snatcher' (see also Watkins 1995: 256).[19]

[18] Even with the traditional explanation of Προμηθεύς as 'the forethinking one', from the root μαθ- of μανθάνω 'understand', as it was also interpreted by the Greeks themselves, it is difficult to account for the long vowel. In the supplement to Chantraine's etymological dictionary (2009: 1348), de Lamberterie rightly observes: "L'analyse formelle de la base greque μᾱθ- fait difficulté de toute manière qu'on la rattache à μαθ- ou à Skt. *math-*". At least it seems likely that the *s*-stem προμηθής 'forethinking, cautious' with the abstract προμήθεια 'foresight, caution' and the denominative προμηθέομαι are derived from -μαθ-, perhaps with secondary influence from μήδομαι 'deliberate' or μῆτις 'measure, skill, craft' (Beekes 2010: 1237). Thus, rather than assuming one solution for the vowel length of προμηθής, another for that of Προμηθεύς, one might suggest that the latter was remodelled after the former by popular etymology.

[19] While basically accepting Kuhn's theory, Drachmann (1911: 78–82) was acutely aware of the inherent contradiction between Prometheus's action and the interpretation of his name: "obviously, 'the fire-grinder' cannot be the same god as the Πυρφόρος 'the fire-bringer'. Making fire by grinding is something quite different from stealing it" (my translation). I am grateful to Bo Alkjær for fruitful discussion and for bringing my attention to Drachmann's work.

5. *$menth_{1/2}$- in Balto-Slavic

In Balto-Slavic, especially Baltic, the root *$menth_{1/2}$- is well attested, in verbal as well as nominal formations. Thus, Lithuanian has a *į*-present *mę̃sti* (*menčiù*) 'stir (by food preparation)' with the compounded *į-mę̃sti* 'stir in (flour)' (*ALEW* 2: 634, Fraenkel 1962: 437–438, Derksen 2015: 314). Internally the verb is connected with several nominal derivatives such as *meñtė/mentẽ* 'ladle for stirring dough or mash, trowel, shovel', *mentalas* 'porridge' and *mentùris, meñturis, menturỹs* 'whorl stick', with an exact match in Latv. *mieturs, mìeturis* 'whorl stick, mashing stick, churning stick' (Mühlenbach 1925–1927: 656–657).

Of the Slavic cognates one may mention OCS *męsti* 'trouble, disturb', SCr. *mésti* 'disturb, mix, stir' with the corresponding causative/iterative OCS *mǫtiti* 'disquiet', *mǫtati sę* 'be agitated', Czech *moutiti* 'make cloudy, grieve worry; mix, churn, (butter)' with the same stem formation as Ved. *manthấyati* 'lets stir (milk)', and the instrument nouns Pol. *mątew* 'whorl stick', OCzech *mutev* 'pestle' (Specht 1935: 256 and 1937: 13; Derksen 2008: and 315 339–330; *ĖSSJa* 19: 12–13).[20]

6. *$menth_{1/2}$- in Germanic

In Germanic the only commonly acknowledged derivative of the root is the instrument noun ON *mǫndull* 'handle on a grinding mill' < **mandula-* (Kroonen 2013: 352–353), i.e. *$month_1/_2ulo$-.

However, an additional example may be found in the name of the mythological character *Mundil-fœri* or *-fari*, for which I would advocate an analysis as 'the one leading, i.e. turning the grinding mill' (see Section 9 below).

This would connect *mundil-* with the archaic subgroup of Germanic instrument nouns in *-ila-* exhibiting zero grade in the root, the type of **tugilaz* 'rein': OHG *ziohan* 'draw' or **slutilaz* 'key': OHG *sliozan* 'close'. The exact morphological analysis of these nouns has been subject to some discussion. Thus, Rasmussen (1999) considered them **-tlo-* derivatives with introduction of the thematic vowel from the corresponding verb and the Verner variant of the suffix **-ðla-* > **-lla-* > *-la-*, where the geminate was regularly simplified after the non-initial syllable.

While this is in principle an attractive explanation, it fails to account for the ablaut difference between zero-grade nouns and full-grade verbs.

[20] According to Vaillant (1974: 618), Russ. *smetana* 'sour milk' does not belong here (thus *IEW* 732), but is rather a substantivized participle of **sŭ-metati* 'throw together'.

Besides, as objected by Kroonen (2017: 106), "*-*etlo*-, *-*ed^{h}lo*- [or, we may add, *-*et^{h}lo*-] would have resulted in PGm. **-*e-la*-" since "non-initial *-*e*- is not otherwise raised to -*i*- in Germanic, as is demonstrated by the difference in umlaut between G *er fährt* and *ihr fahrt* < PGm. **fareþi* : *fareþe* < PIE *-*eti*, *-*e-th$_1$e*". Alternatively, Kroonen therefore assumes that the connecting -*i*- is taken over from *-*i̯e/o*-verbs, but this is equally unsatisfactory as there is no evidence for such a present formation in the relevant verbs.

Consequently, the -*i*-vowel is probably best considered a prop vowel. Such a vowel may have been inserted after the loss of an internal laryngeal identical with the stative suffix, leading to a "transposit" **mn̥th$_1$/$_2$-ə$_1$-tlo*-. Such a type does seem to be secured for the proto-language, and irrespective of the precise historical analysis, -*ila*- following a zero-grade root is, as we have seen, known from other instrument nouns.[21] In compounds whose first member is an *a*-stem, as in **mundila-fœri* > *mundilfœri*, loss of the compositional vowel -*a*- is regular in an original third syllable; cf. Goth. *þiudan-gardi* 'kingdom' from *þiudana*- and *anþar-leikō* 'otherwise' from *anþara*- (Meid 1967: 21).

7. *menth$_{1/2}$- in Italic and Greek

Apart from the verb *mandō* discussed above, the only commonly accepted relic of **menth$_{1/2}$*- in Italic is the technical term *mamphur* (probably Oscan), explained as follows: *appellatur loro circumvolutum mediocris longitudinis lignum rotundum, quod circumagunt fabri in operibus tornandis*, that is, a round stick, rotated by a strap and used by carpenters (see Ernout & Meillet 1959^{4}: 381). This description corresponds quite precisely to the above-mentioned Indian mechanisms for making fire and churning butter, and it fits in equally well with the Germanic idea of the handle of a hand mill. With some formal variation (proto-forms **manfar*-, as in Sabellic, and **mandar*-), the word has survived into Romance, e.g. Cors. *mánfaru* 'crank', Prov. *mandre* 'lever' and south Fr. *mandra* 'penis', with a similar semantic development as the Vedic verb *manthati* (see Section 2).

Similarly, one may consider Vendryès's old suggestion (1920) to derive Lat. *mentula* 'penis' from the same root. Apart from the full

[21] The prop vowel would initially have been inserted after root-final velars; see beside **lukila*-, **tugila*- also OE *slegel*, OHG *slegil* 'club': vb. OHG *slahan*. See Olsen 2014 and Olsen in preparation for further discussion of this variant of *-*tlo*-derivatives.

grade or zero grade in the root, the word formation would be identical with that of ON *mǫndull* (see Section 6), assuming a development **-nt^h-* > *-nt-* as in *centō* 'blanket': Skt. *kanthā-* 'rag, patched cloth'.

Finally, a somewhat overlooked term from Greek might belong here, viz. the scantily attested Hesychean μονθυλεύειν, with the same meaning as ὀνθυλεύειν 'dress with forced meat or stuffing' (*GEW* 2: 395; Beekes 2010: 1083). The latter is generally assumed to be the correct form, but if it were the other way round we would have, once more, a basic stem **month$_{1}$/$_{2}$-ulo-*, exactly matching the Old Norse form, and the meaning would not be all that surprising as the stuffing would consist of finely ground ingredients stirred together.

8. The root **menth$_{1/2}$-* – nominal derivatives and semantics

As we have now seen, an actual verb based on the root **menth$_{1/2}$-* can be safely demonstrated for Tocharian, Indo-Iranian and Balto-Slavic. If Lat. *mandō* 'chew' is added, the primary meaning may be narrowed down to 'grind (by stirring), churn, chew' in the imperfective aspect vs. 'snap, snatch', whence 'steal, remove' in the aorist.

Turning to the inventory of nominal formations, we observe certain common features. As already noticed by Specht in his above-mentioned works from the 1930s, an underlying *u*-stem seems to be predominant, as in the West Slavic terms, Pol. *mątew*, OCzech *mutev*. This is consistent with the fairly widespread segment **-ur-* or **-ul-*:

- **-ur-*: Lith. *mentùris*, Latv. *mìetur(i)s*, Oscan (?) *mamphur*
- **-ul-*: ON *mǫndull*, Lat. *mentula*, Gk. μονθυλεύειν (?)

This is perhaps most easily understood on the background of an original **-u̯er/u̯en-*heteroclitic with neuter **-u̯r̥* and a corresponding collective **-u̯ōl* (see Olsen 2010: 77). Here **-ur-* would be derived from the analogical weak cases of the former stem, **-ul-* of the latter. See, for example, from **h$_{1}$ed-* 'gnaw, chew',[22] **h$_{1}$édu̯r̥* > Gk. εἶδαρ 'food' vs. **h$_{1}$édu̯ōl* → Hitt. *idālu-* 'evil', and for **-u̯ōl* vs. **-ul-* e.g. from **u̯ei̯d-* 'see', **u̯ei̯du̯ōl* → Gk. εἴδωλον 'picture': εἰδυλίς 'acquainted with', Lith. *pa-vìdulis* 'look', OPr. *weydulis* 'eyeball', or from **sh$_{2}$ei̯-* 'tie, bind', **sh$_{2}$iu̯ōl-* > Hitt. *išḫial-* 'cord' : *išḫiul-* 'connection, treaty'.

[22] With this root meaning the participle **h$_{1}$dónt-* 'tooth' would be 'chewing' rather than 'biting', and we would not have to worry about an aspectual difference in relation to the root present 'eat'.

On the semantic level, it is worth noticing that the application of the root *$*menth_{1/2}$- to dairy terminology is only attested for Indo-Iranian and Balto-Slavic. This is consistent with the fact that inherited elements within this word field are particularly richly represented in Germanic, Baltic and Indo-Iranian, and thus perhaps a tiny indication for an "Indo-Slavic" node in the Indo-European family tree, as per Thomas Olander (2019).

A more original meaning of the verb in a technological sense seems to be something like 'churning or stirring together either solid or a combination of solid and fluid ingredients', as in Tocharian *mänt-* about clay, and the terminology pertaining to porridge, gruel, mash and so on in Balto-Slavic as well as Indo-Iranian. Here it is perhaps not too daring to see a linguistic reminiscence of the food dishes mixed of cereals and animal protein found in Corded Ware ceramics (Oudemans & Martens 2015).

9. The cosmic mill in Norse mythology

Returning to the Indic myth of the Churning of the Ocean, we dimly perceive some ancient features, though it would seem that what we are dealing with is really a conflation of several mythical motifs rather than one coherent narrative going back to a distant past.

The primary motif is the act of churning, whether with the aim of generating blessings, as part of a cosmogonic myth or a combination of the two. The folklorist Clive Tolley (1995) begins a meticulous investigation of this theme in the Finnish epic Kalevala and in Old Norse with a reference to the Indic myth:

> The milk ocean is churned, in Indian myth, with an outlier of the world mountain to produce the *soma* of immortality, as well as a host of other guarantors of the world's fertility and well-being, such as the sun and the moon. […] No myth relating anything precisely comparable to this striking event appears to exist in Norse, yet the image of a cosmic mill […] may be recognized in certain fragmentary myths.

It is indeed true that the information we get from Norse tradition is quite scanty. One source is the Eddic Song of the Mill or *Gróttasöngr*, where two slave girls grind wealth from a magic grindstone.[23] Another

[23] Rydberg (1886) has already treated the mythological complex of a 'world mill' in great detail.

one, which is more important for our purpose, is a passage from the Vafþrúðnismál (23):

Mundilfœri heitir
hann er Máni faðir
ok svá Sóla it sama;
himin hverfa
þau skulo hverien dag
áldom at ártali

"He is called Mundilfœri
the father of Moon
and also of Sun,
they are to turn heaven
every day
for the reckoning of years for men"[24]

As noted by Tolley (1992), "the cosmic mill was not, in extant Norse sources, a widely developed mythologem. Nonetheless, the myth of Mundilfœri connects the turning of the cosmos via a 'mill-handle' with the regulation of seasons".

What is important here is that, beside the etymologically related *mǫndull* 'mill', the very name *Mundilfœri* strongly suggests an inherited feature. For the final member of the compound, *-fœri*, Tolley (1992: 75) reasonably assumes a meaning 'mover, carrier' with reference to Fritzner (1986: 528–530). For *Mundil-*, on the other hand, he offers several explanations: it "may be related to *mund* 'hand' or *mund* 'time';[25] there may even be a play on both senses accounting for the uniqueness of the word". However, failing to explain the complete word formation, including the suffix *-ila-*, this is not convincing. Therefore, it is preferable to follow the alternative interpretation quoted from Cleasby & Vigfússon (1957) that *mundil-* is "akin to *möndull* referring to the veering round or revolution of the heavens" (see Section 6 above for the derivation).

Thus, derivatives of the root $*menth_{1/2}$- occur in both Indic and Germanic tradition to indicate some kind of cosmic churning. In the Indic myth, the churning, expressed by the verb *manthati*, takes place

[24] Translation by Tolley (1995: 75).
[25] Magnússon (1989: 641) also favours a connection with *mund* 'time'.

in the ocean, and the moon was the first boon to appear, while in Germanic mythology *Mundilfœri* was the father of Sun and Moon.

10. An Indo-Iranian–Uralic connection: *skambhá-* and *sampo*

Beside the sporadic references in Old Norse literature, the idea of a magical device with cosmic implications in a North European context is best known as a striking leitmotiv of the Finnish national epic, the Kalevala. This device is the *sampo*. Compare for example the following description of the mission to be carried out by the smith Ilmarinen to retrieve the beautiful "maiden of Pohyola" (Saga X):

Fairest maiden of Pohyola,
Daughter of the earth and ocean.
From her temples beams the moonlight,
From her breast, the gleam of sunshine,
From her forehead shines the rainbow,
On her neck, the seven starlets,
And the Great Bear from her shoulder.
"Thou the only skillful blacksmith,
Go and see her wondrous beauty,
See her gold and silver garments,
See her robed in finest raiment,
See her sitting on the rainbow,
Walking on the clouds of purple.
Forge for her the magic Sampo,
Forge the lid in many colors,
Thy reward shall be the virgin,
Thou shalt win this bride of beauty;
Go and bring the lovely maiden
To thy home in Kalevala."[26]

The cosmic references to the rainbow, moon, sun and stars are reminiscent of the Indic and Germanic texts, but hardly diagnostic for a historical evaluation without any linguistic support, as similar concepts are widespread throughout north-west Eurasia. What may be important, however, is the designation of the *sampo*.

Tolley (1995: 65) defines *sampo* or **sampoi* morphologically as an adjectival derivative of an unattested and etymologically unclear

[26] Translation by J. M. Crawford.

**sampa*, for which he quotes and translates Haario's description (1967: 200): "*sampa* [...] means part of a rotating machine in which the vertical axle is supported and in which the important part is the *sampa*". This is exactly the function of the churning rod or world axis, the Mount Mandara in the Indic myth, and a linguistic clarification of the word would be an essential guideline.

According to the predominant view, **sampa* is an early loanword form Indo-Iranian, but opinions differ as to whether the proto-form was **stamb^{h}a-* or **skamb^{h}a-*.

stamb^{h}a-* would be a derived from the root **stemb^{h}h$_{1/2}$-* or perhaps rather **stembh$_1$/$_2$-* 'support' (*EWAia* II: 754; *LIV* 595–596; Rasmussen 1989: 245) with the Vedic verb *stabhnáti/stabhāyáti*, Lith. *stem̃bti* 'resist' etc., and in Sanskrit (Kāṭh.+) a thematic derivative *stambha-* occurs in the meaning 'post, pillar, column; stem'. In his recent comprehensive treatment of the Indo-Iranian loanwords in Uralic, Holopainen (2019: 211) accepts the explanation of **stamb^{h}a-* as the origin of Fi. *sammas*, Est. *sammas*, arch. *sambas* 'pillar', as well as Fi. *sampo*, rejecting the alternative derivation of the latter from **skambha-* as "not very likely", knowing of no parallels to a phonetic substitution *sk* → *s*. On the other hand, it is remarkable that even the assumed, and indeed very likely, substitution *st* → *s* is difficult to corroborate for loanwords of Indo-Iranian origin (p. 332): "There are not many examples of this development in Indo-Iranian loans (sampas* 'pillar' being perhaps the only one), but this suits the general substitution pattern of the early loanwords into the Uralic languages".

For the fate of **sk*, it is true that we have *k-* in Germanic loanwords like Fi. *kaunis* 'beautiful' < **skauni-*, Goth. *skauns* etc., but from Indo-Iranian Holopainen's only example of a loanword with **sk-* is Fi. *kanto* 'tree trunk' (p. 120), allegedly from **skand^{h}a-* as in Skt. *skandhá-* 'shoulder; tree trunk'. However, this isolated example may be misleading, as there apparently existed a variant **kandha-* without the initial **s-* in Kafiri and Dardic, e.g. Ashkun *kándā* 'stem, trunk'.[27] Since we cannot know the precise source of the Uralic word, it is then ultimately unknown what we should expect from initial **sk-* in Indo-Iranian loanwords.

[27] See Turner 1966: 785: "Absence of any trace of initial *s-* in Kafiri and Dardic supports possibility of IA. **kandha-* beside *sk°*".

The alternative derivation of **sampa*, whence *sampo*, from **skamb^{h}a-* was first suggested by Erdödi (1932), and later supported by, for example, Kuz'mina (2007: 56):[28]

> The Indo-Aryan (and not Iranian) form, in the meaning 'pillar' and with the mythologized associations with a sacred column, was borrowed into the Finno-Ugrian languages. The image of the magic Sampo mill, an analogue of the world tree in Finnish mythology, originates from it. (Erdödi 1932: 214–219)

This would relate **sampa-* to Ved. *skambhá-* 'pillar' etc., Av. *fra-skəmba-* 'supporting beam, vestibule' with the corresponding verb *skabhnắti* 'supports' (*LIV* 549–550) and beyond Indo-Iranian to Lat. *scamnum* 'stool, bench', presumably from **sk$_{e}$b^{h}no-*, with the diminutive *scabillum*.

From a semantic point of view, the derivation of **sampa-* from **skamb^{h}a-* rather than **stamb^{h}a-* is clearly preferable. While Skt. *stambha-* is the general prosaic word for 'pillar', unattested in the oldest period, Ved. *skambhá-* is loaded with mythological connotations closely resembling the description of the *sampo*. It is the world pillar, keeping heaven and earth apart. Thus, in the Atharva Veda, the whole hymn 10.8 is dedicated to the *skambhá-*; for example, AV 10.8.2:

> *skambhénemé víṣṭabhite dyaúś ca bhū́miś ca tiṣṭhataḥ*
> *skambhá idáṃ sárvam ātmanvád yát prāṇán nimiṣác ca yát*
>
> "By the *skambhá* these two stand fixed apart, both sky and earth; in the *skambhá* [is] all this that has soul, what [is] breathing and what winking"[29]

Cf. also AV 10.7.35:

> *skambhó dādhāra dyā́vāp̥rthivī́ ubhé imé skambhó dādhārorv*
> *àntárikṣam*
> *skambhó dādhāra pradíśaḥ ṣáḍ urvī́ḥ skambhá idáṃ víśvaṃ*
> *bhúvanam ā́ viveśa*
>
> "The *skambhá* sustains both heaven-and-earth here; the *skambhá* sustains the wide atmosphere; the *skambhá* sustains the six wide directions; into the *skambhá* hath entered this whole existence"

[28] See also *EWAia* II: 750–751 and *KeWA* III: 507.
[29] Translations of the Atharva Veda by Whitney (1905).

The idea of the *skambhá-* as the world pillar also permeates the attestations in the RigVeda, thus RV 4.13.5 (Agni):

> *diva skambháḥ sámṛtaḥ pāti nákam*
>
> "as prop of heaven, utterly fixed, he protects the vault"

and RV 9.74.2 (Soma):

> *divó yá skambhó dharúṇaḥ svàtata ā́pūrṇo aṅśúḥ paryéti viśvátaḥ sémé mahī́ ródasī yakṣad āvṛ́tā samīcīné dādhāra sám íṣaḥ kavíḥ*
>
> "The [soma] plant, the prop and buttress of heaven, which, when well extended and fully filled, encompasses in every direction, that [plant] will offer sacrifice to these two great world-halves when they turn hither. The poet unites the united pair and the refreshing drinks"

Obviously, the final evaluation of the material is made difficult by the partial semantic overlap between Ved. *skambhá-* and Skt. *stambha-* and in general between the two underlying roots. Most likely, the nasal in *skambh-* with the verbal forms *skabhnā́ti*, *skabhāyáti* is analogically transferred from *stambh-* with *stabhnā́ti*, *stabháyati*.[30] Fi. *sammas*, Vog. *sammaz*, Est. *sammas*, *sampas* all have the general meaning 'pillar', and here a derivation from **stamb^{h}a-* is fairly straightforward. As for Fi. *sampo*, however, the use in a very specific mythological context clearly favours a connection with Ved. *skambhá-*, which would not be the only Indo-Iranian–Uralic borrowing from the religious sphere, thus **juma* in Fi. *jumala* 'God', presumably from **dyuman-*; cf. Ved. *dyumná-* 'heavenly glory' (Holopainen 2019: 107–108 with ref.) and Fi. *taivas* 'sky, heaven' from **daiwas*; cf. Ved. *devá-* 'heavenly; god' (p. 270 with ref.).

The question is then how to deal with this difficulty. We might assume a regular substitution **sk-* > **k-* vs. **st-* > **t-* or *s-*. This would imply a contamination between **sampa-* and **kampa-* at the expense of **kampa-* at some point due to the partial semantic overlap. Alternatively, one may consider whether **sk* > *s* could be the

[30] *LIV* 549: "? ****skebbH-*** 'stützen' with note 1. "im Iir. sekundär nach bedeutungsnahem **stamb^{h}H-* […] zu **skamb^{h}H-* umgestaltet", and *EWAia* II: 750: "Der Nasal in iir. **skamb^{h}H-* ist vielleicht von *stambh*^{1} bezogen". Cf. also Ved. *śámba-* 'pole, stick, cudgel' (also used about a weapon used by Indra).

regular sound substitution in Indo-Iranian loanwords. Germanic loans in **st-* are usually rendered by Finnish *t-*, but more rarely the cluster is simplified to *s-*.[31] Thus, it is hardly inconceivable that **sk-* could undergo a similar development to *s-*, so that the two original stems **stamb^{h}a-* and **skamb^{h}a-* would merge phonetically.[32] At any rate, it seems clear that the complex semantic impact of IIr. **skamb^{h}a-* lives on in Fi. **sampa*.

11. The cosmic mill in Vedic, Nordic and Finnish

The idea of a cosmic mill is common to Old Indic, Nordic and Finnish mythology and, as we have now seen, there is some linguistic foundation for a historical connection between these three traditions. The Indic myth of the Churning of the Ocean and the less elaborate Old Norse story of Mundilfœri and his beautiful children, Sun and Moon, are united by the common use of the inherited root **menth$_{1/2}$-*. In Indic, we have the verb indicating the actual churning and various nominal derivatives and, in Old Norse, the archaic instrument noun describing the device used for it.

There are, however, also notable differences. In the Germanic myth of Mundilfœri, there is nothing to indicate that the actual grinding or churning takes place in water. The supplementary texts of the *Gróttasöngr* involve a quern by which all sorts of blessings are produced. In the end, though, the *Grótti*, the quern mill, is stolen by the sea king Mýsingr, it breaks, by sinking it produces a whirlpool, and all the salt that has been ground falls into the sea and makes it salty (see the detailed treatment in Tolley 1995).

When the setting of the Indic myth is a sea of milk, this is hardly original but rather mirrors the intense preoccupation of the old Indo-Iranians with the blessing of cows and everything they give to mankind.

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[31] See Hofstra 1985: 69 and 163–165 for examples and references, especially to Koivulehto (1979), who was the first to demonstrate the development **st-* > *s-* in Germanic loanwords.

[32] Erdödi (1932: 214 and 218) considered the development **sk* > *s* regular in loanwords of Indic or Indo-Iranian origin, but his only example is Finn. *säle* 'segmen lini pinei', Vog. *sili* 'cut up', *silti* 'cleave', Hung. *szel* 'scindere' etc., which he derives from the root **skel-* 'cleave' (i.e. **skelH-*, *LIV* 553,) as in Lith. *skiliù* 'set fire', ON *skiljan* 'part, divide, separate'. However, this root is not attested with the mobile *s-* in Indo-Iranian, so if it is a loanword – and thus a parallel to the development **st-* > *s-* – it probably has another source. In consideration of the Hungarian cognate it must be quite old.

In the Viṣṇu Purāṇa (2.4), we are presented with a list of seven concentric seas, *lavaṇa-* 'salt water', *ikṣu-* 'syrup', *surā-* 'wine', *ghṛta-* 'clarified butter', *dadhi-* 'curds', *dugdha-* 'milk' and *jala-* 'fresh water'. This would mean that the sea of milk is only a step on the way to obtaining the *amṛta*, and that the original scene was simply the ocean.

The magic *sampo* of the Kalevala has remarkable features in common with the Nordic *grótti*, and it may seem overly cautious when Tolley (1995: 78) argues that "many points speak against any influence". After all, a mythological complex does not have to be transferred wholesale, and it is quite conceivable that we are dealing with mixtures of indigenous and foreign features. However, one aspect that is overlooked by Tolley is the likely derivation of *sampo* from **stamb^{h}a-* or, in other words, the Indo-Iranian–Uralic connection. Thus, when it is objected that "Grotti is a quern mill, and the sampo is often pictured as a mill, though its origins seem rather to be in the world pillar", Old Indic provides us with the missing link. Here the *skambhá-* is the world pillar, and the Mount Mandara is at the same time the centre of the world and the churning stick.

12. Gathering the threads – the compilation of a myth

Attempting to understand the narrative of the Churning of the Ocean is like opening a Pandora's box of mythological motifs known from various traditions, whether Indo-European, foreign or a combination of both. A detailed investigation of this complex subject matter would by far exceed the scope of the present linguistic approach, so I will leave out such remarkable aspects as the conflict between devas and asuras and the Dumézilian idea of an "Ambrosian cycle" (Dumézil 1924), confining myself to briefly pointing out a few formal details.

Judging from the linguistically based similarities between features shared with Germanic, the idea of a world mill would seem to go back to the common prehistory of Indo-Iranian and Germanic. How far back that is depends on the position of the two branches in the Indo-European family tree where especially the status of Germanic remains quite uncertain.

This motif, however, is interwoven with the idea of a world pillar, either in the form of a cosmic mountain or, more often, a tree or world pillar. In the Indic myth of the Churning of the Ocean, the churning stick is the Mount Mandara, as in the Avesta the mountain Haraiti is assumed to be the centre of the universe; cf. Yt.12.25:

> *yatcit ahi* […] *upa taērəm Haraiθiiå barezo* […] *yat me aiuuito uruuišəṇti starasca måsca huuarəca*
>
> "Whether thou […] art upon the Taera of the height Haraiti, around which the stars, the moon, and the sun revolve" (based on Geldner 1896)

Additionally, since the Rigveda we have found the parallel concept of a world tree, the *skambhá-*, and a similar idea is known from the mythical Zoroastrian *gaokərəna* tree (West 2007: 346 with ref.).[33] The most striking account, however, relates to the Old Norse cosmic ash tree, the Yggdrasil, whose branches extend across the world, whose top is over the sky and whose roots are in Hel.

The very point of the churning is the acquisition of the *amṛ́tam* (< **n̥-mr̥tom*) with a close cognate in the Greek derivative ἀμβροσία, the drink of immortality (see Mallory & Adams 1997: 494–496). In Indo-Iranian tradition, this was generally replaced by **sauma-* > Ved. *soma-*, Av. *haoma-*, also one of the blessings churned out of the ocean.[34] Hence, it is an interesting feature that the *skambháḥ* in the Rigveda was identified with the soma plant, in much the same way as the Iranian *gaokərəna* yielded soma.

A more sinister feature of the cosmic tree is its association with snakes and similar malevolent creatures. An evil lizard had its dwelling by the *gaokərəna*, and at the foot of the Yggdrasil a terrible serpent, the Nidhogg, was lurking. In the Grímnismál (v. 34), Odin himself tells that *Ormar fleiri liggja und aski Yggdrasils, en þat of hyggi hverr ósviðra apa* "More serpents lie beneath the ash Yggdrasil than any fool can

[33] See also West (2007: 346) on a possible Greek parallel in connection with the myth of Atlas. Thus, Od. 1.52–1.54: Ἄτλαντος θυγάτηρ ὀλόφρονος, ὅς τε θαλάσσης πάσης βένθεα οἶδεν, ἔχει δέ τε κίονας αὐτὸς μακράς, αἳ γαῖάν τε καὶ οὐρανὸν ἀμφὶς ἔχουσι "daughter of Atlas of baneful mind, who knows the depths of every sea, and himself holds the tall pillars which keep earth and heaven apart" (translated by A. T. Murray, Loeb Classical Library).

[34] For decennia, the identification of *soma*/*haoma* has been a matter of heated debate. Perhaps it was an extract of the ephedra plant: see Mallory & Adams (1997: 494–496) and *EWAia* II: 748–749 with ref. The closest cognate seems to be Arm. *k'am* 'juice' < **su̯āmo-* < **suh₂/₃mó-* (Olsen 1992: 135) from a root **seu̯h₂/₃-* 'press' (Ved. *sunóti* 'press soma' for **sunáti*, cf. also *EWAia* II: 713–714). This would make IIr. **sauma-* an *o*-grade derivative **sou̯h₁/₂mo-* > **soumo-* with loss of the laryngeal due to the Saussure effect. The root-final laryngeal also explains the otherwise enigmatic Verschärfung of Icel. *söggur* 'wet, damp' < **sou̯h₁/₂-o-* (see also Magnússon 1989: 1017).

imagine". This naturally recalls the fearful Vasuki, used as a churning rope in the Indic myth.

Beside the Vasuki, the story also features a separate cosmic snake *Ananta-*, 'Endless', at the shore of the ocean, even though the two are likely to spring from the same original source. For a parallel of the *Ananta-*, we only have to think of the Nordic *Midgard Serpent*, biting its own tail and living in the deep ocean surrounding the world. However, in the case of a gigantic snake of the deep waters – whether the rivers or the ocean – we have the advantage of a reconstructable phrase for at least the stage preceding Balkanic and Indo-Iranian.

In his chapter on the 'Serpent of the Deep', Watkins (1995: 460–463) has expounded and elaborated previous literature[35] on the connection between the Old Indic *Áhir Budhnyàḥ* and the Greek Πύθων/Τῡφῶν. This sea monster is pictured as living in the deep rivers in Vedic literature, thus RV 7.34.16–7.34.17:

abjắm uktháir áhiṃ gṛṇīṣe
budhné nadīnāṃ rájassu ṣīdan
mắ no áhir budhnyò riṣé dhān
mắ yajñó asya sridhad ṛtāyóḥ

"With songs I praise water-born serpent
Sitting in darkness in the depths of the rivers.
May the serpent of the Deep not bring us to harm;
May the worship of this (singer) who seeks truth not go wrong"[36]

The Greek counterpart comes in two versions: Πύθων, the dragon slain by Apollo, and Τῡφῶν, Τῡφώς, Τύφάων, Τύφωεύς, the monstrous adversary of Zeus, both assumed to be developments of a single myth. Watkins (1995) even points to the co-occurrence of Πύθων and the word for 'snake', ὄφις, corresponding to Ved. *áhi-*, in Callimachus, Hymn 2.100–2.101:

Πῡθώ τοι κατιόντι συνήντετο δαιμόνιος θήρ,
αἰνὸς ὄφις

"Going to the Pytho you were met by a marvelous beast,
The terrible serpent"

[35] Especially Toporov 1974.
[36] Translation by Watkins 1995.

On this background, it has been possible to reconstruct the phrase "*$og^{wh}i$- [i.e. *$h_3og^{wh}i$-] b^hud^h-" or in the reverse order "b^hud^h- … $og^{wh}i$- [$h_3og^{hw}i$-]" where *b^hud^h-, as in Ved. *budhnyà*-, Gk. Πύθων coexists with the variant *d^hub^h- – one of them metathesized – in Gk. Τῡφῶν from a root meaning 'deep' or 'bottom'; cf. for example also Lith. *dubùs* 'hollow, deep' contrasting with ON *botn*, OE *botm* 'bottom'.

More recently, Martirosyan (2018) has demonstrated the survival of the same phrase in an Armenian incantation against snakes and scorpions:

Kapim zōjə
Kapim zkaričə
Andndayin ōjə

"May I bind the serpent,
May I bind the scorpion,
The Abyssal Serpent"

Here *andndayin* is an adjectival derivative of the privative compound *andowndk'* (*o*-st.) 'bottomless', i.e. 'abyss', as if *$n̥$-d^hud^hno-, presumably by distant assimilation from either *-b^hud^hno- or *-d^hub^hno-. The word for serpent, *ōj* (*awj*, *i*-st.) < *$h_2n̥g^wi$- or *h_2ang^wi-, is probably a lexical substitution for the predecessor of Gk. ὄφις, Ved. *áhi*- and historically related to Lat. *anguis*, Lith. *angìs* < *h_2ang^wi-. When Martirosyan (2018: 193) argues that a "nasalless by-form of this PIE word is reflected in Gk. ὄφις 'snake', ἔχις 'adder', and Arm. *iž*, *i*-stem 'viper'", this is formally problematic as at least ἔχις precludes an initial *h_2-. *Iž* rather goes back to a proto-form *$h_3ēg^{wh}i$- with lengthened grade and non-colouration as a consequence of Eichner's Law and would thus belong etymologically with ὄφις and *áhi*-.[37]

Finally, Toporov (1974) has suggested a connection between the Vedic and Greek evidence and SCr. *bȁdnjak* < *b^hud^hni- 'oak log lit on Christmas eve' as a symbol of the winter solstice, the turning of the year. If this is correctly interpreted, it is an important indication of the original identity between the Serpent of the Deep and the snake under the cosmic tree.

[37] For further discussion of this complicated word family, see *EWAia* II: 156; Olsen 1999: 78; Schindler 1994; Martirosyan 2010: 153, 299–300.

Despite the convincing evidence of Ved. *Áhi- budhnyà-*: Gk. Πῡθώ … ὄφις : Arm. *Andndayin awj* and perhaps SCr. *bȁdnjak*, there remains a formal detail for which a satisfactory solution is still missing: the underlying root of *budhnyà-* is **b^heu̯d^h-/*d^heu̯b^h-*, and therefore the short ŭ of Gk. Τῦφωεύς, Τῦφάων is as expected, while the long ū of Πῡ́θων, Τῡφῶν is surprising. West (2007: 347) describes the variation as "problematic", while Watkins boldly ventures to suggest "expressive lengthening". However, according to a Greek sound law recently discovered by Kristoffersen (2019), it seems that a *u*-diphthong in Greek is regularly monophthongized to ū before a labial consonant. If we apply this rule to Πῡ́θων/Πῡ́θω and Τῡφῶν it is possible to eliminate the difficulties: Πῡ́θων/Πῡ́θω vacillates between an *oi̯*-stem and an *n*-stem, and in both cases a full grade is quite as expected; the same goes for the *ou̯*-stem Τῡφῶν.[38] From a corresponding **-men-*stem, as in Gk. πῠθμήν 'bottom, ground', on the other hand, we get the thematic derivative with zero grade in the root, **b^hud^{h}mnó- > *b^hud^{h}nó-*[39] whence **b^hud^{h}n(i)i̯o-* > Ved. *budhnyà-*.

It would then seem that the myth of the Churning of the Ocean incorporates two aspects of the cosmic serpent, the Vasuki representing the terrifying creature lurking at the root of the cosmic tree and the Ananta as a continuation of the Serpent of the Deep. Whether this deep was the ocean, as in the Indic narrative and the tradition of the Midgard Serpent, or the rivers, as in the Vedic *Áhir Budhnyàḥ*, may not be crucial. As noted by Terje Østigård at the *LAMP* meeting in Uppsala, October 2021, to the people of the steppe with their herds of cattle and horses, the deep rivers were as terrifying and as much of a barrier against anything that might lie beyond as the ocean itself.

Despite a wealth of interesting details in the *samudramanthana*, it is necessary to end this survey by striking a somewhat negative note: there is milk and there are snakes, and there is ample evidence for an old connection between the two. Here, however, their meeting is most likely late and accidental.

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[38] Cf. Schwyzer 1968: 479, 480, 558, 477.

[39] **-mn-* > **-n-* after roots containing a labial; see Rasmussen (1989: 187), elaborating on Schmidt (1875: 121–122).

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6. Farming, fertility and foaming water
Indo-European ritualizations of life-giving growth forces in Scandinavian agriculture

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Abstract

The winter is a neglected theme in not only Indo-European studies but also ecological and water studies, despite the fundamental role of the cold and long season defining the life and well-being for all in agricultural and pastoral societies. Adapting to and surviving the hard and difficult season was the greatest challenge in all societies up to modern times, and throughout Europe north of the Alps there is a great uniformity in subsistence and ritual practices structured around the winter. By using comparative nineteenth-century ethnographic documentation of agricultural practices with a special focus on Scandinavia, and archaeological material spanning from the Bronze Age onwards, the unique Indo-European winter rituals and sacrifices are discussed in a water perspective. Compared to agricultural societies in temperate climates, in the cold north rainmaking rituals were rarely conducted because there was too much bad weather jeopardizing the harvest. In the north, the aim was to combat and overcome the winter as early as possible and to secure the continuity of the growth forces from the harvest through the winter until it was time to sow again. This was the primary ecological frame structuring the ritual year in Indo-European societies in the cold north.

Introduction

The Nordic winter defined the seasons and the agricultural cycle, and whether it would be a year of famine or plenty. Farming in cold climates poses exceptional challenges and in pre-industrial cultures they

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were sought to be solved by specific ritualizations believed to conquer and control hostile powers in nature. From the Bronze Age onwards, one can identify rituals that institutionalize Indo-European beliefs putting emphasis on the continuity between the seasons with a particular focus on winter and sacrifices. In all comparative religions, the relation between the sun and water is fundamental and structures rites and religious life, and the major rituals and sacrifices relate to hydrological and agrarian cycles. The essential agrarian rituals aimed to incite and active the latent forces in nature, which enabled new life and successful harvests. A fundamental challenge was how to overcome the winter and break the iron-grip of the cold, and in this world foaming water – always flowing and moving – was a powerful source to underground forces mightier than even King Winter (Oestigaard 2021a; 2021b).

By using archaeological examples in combination with ethnographic material from Scandinavia, the aim is to provide new insights into ritualisations of life-giving forces and fertility in Scandinavian agriculture, with an emphasis on different processes of inciting growth forces and activating life in nature. Thus, the main objective of this analysis is to conceptualise the ritualised ways and by which means immanent powers, ancestors and divinities were incited and activated as part of nature's forces combating malevolent weather, wind and water – and the winter. This will be done by (1) discussing theoretical aspects and discourses in archaeology with an emphasis on the relation between culture and nature, and how the Norse mythology can be interpreted from, and incorporated into, an Indo-European ecology, (2) analysing ethnographic and folkloristic examples of agrarian cosmologies with a special focus on sowing and ploughing, cattle and snakes, (3) presenting and contextualising selected archaeological examples from the Swedish Bronze Age as part of an agrarian ecology and cosmology, and (4) discussing Indo-European traditions and how one can put preliminary dates on the developments of certain ritual practices.

The culture–nature divide: seasonality and landscape studies

Scandinavian archaeology is a very good example of what historian Terje Tvedt has called "water blindness": it is a history written without water, weather and winter. The ways water has been organized and controlled in society have significantly shaped its development, economy, social organization – and religious concepts (Tvedt 2006–2016; 2016; 2020). In particular, in the cold north, snow is the dominant

Figure 1. Fertile fields covered by snow. Håga Valley in Uppsala, Sweden, 6 January 2022. Photo: Terje Oestigaard © License: CC BY-NC.

form of water throughout large parts of the year (Figure 1). The winter was the greatest challenge for living and surviving, and, even as late as in recent times, old people did not count how many years they had lived but how many winters they had survived. From Finland, the

brutal realities of being a farmer were seen directly in failed harvests with subsequent sufferings – and deaths. On average within a decade, only one harvest was good with abundant crops, two were lost or catastrophic, three were poor and four were mediocre or barely sufficient. In other words, within a decade, up to half of the harvests were lost or insufficient (Huhtamaa 2018; Huhtamaa & Helama 2017; see also Charpentier Ljungqvist 2015; 2017).

Still, in Scandinavian archaeology a paradoxical perception has prevailed that ecology does not matter, despite the extreme seasonal variation where temperatures may change from minus 30 to plus 30 degrees. Even after decades of debates about climate change, social sciences have difficulties in conceptualizing culture–nature interactions. This is partly the consequence of processual archaeology's nature deterministic approach, since New Archaeology adapted parts of the neo-evolution developed by Leslie White and Julian Steward (Trigger 1994: 292). In anthropology, Roy Rappaport (1979) describes parts of this polarized debate and the term "vulgar materialism", as defined by Jonathan Friedman:

> Vulgar materialism, mechanical materialism, and economism are terms which refer to a simplistic kind of materialism, rejected by Marx, which envisages social forms as mere epiphenomena of technologies and environments, either by direct causation or by some economic rationality which makes institutions the products of social optimisation. (Friedman 1974: 456)

Marx himself wrote in 1859 in his *Contribution to the Critique of Political Economy*: "The mode of production of material life conditions the general process of social, political and intellectual life. *It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness*" (Marx 1970: 20–21, my emphasis). Archaeologist Ian Hodder says that:

> [by] materialist approaches [I mean] those that infer cultural meanings from the relationship between people and their environment. Within such a framework the ideas in people's minds can be predicted from their economy, technology, social and material production. Given a way of organizing matter and energy, an appropriate ideological framework can be predicted. (Hodder 1994: 19)

When it comes to culture and nature, this divide has been described as the "two cultures" – a universe of humanities and a universe of the

natural sciences (Snow 1966). This divide goes back to the founding fathers of sociology, and Émile Durkheim (1858–1917) established a dictum in social and human sciences that social facts or variables can only be explained by other social facts or variables (Durkheim 1966[1904]). This dogma has had a fundamental impact with regard to how humans and cultures have been understood. Anthony Giddens writes:

> The origins of risk society can be traced to two fundamental transformations which are affecting our lives today. […] The first transformation can be called the end of nature; and the second the end of tradition. The end of nature […] means that there are now few if any aspects of the physical world untouched by human intervention. […] For hundreds of years, people worried about what nature could do to us – earthquakes, floods, plagues, bad harvests and so on. At a certain point, somewhere over the past fifty years or so, we stopped worrying so much about what nature could do to us, and we started worrying more about what we have done to nature. The transition makes one major point of entry in risk society. It is a society which lives "after nature". (Giddens 1999: 3)

Thus, about two decades ago one of the most influential sociologists of our time could argue that we lived "after nature" and "after tradition". In archaeology, landscape studies fitted perfectly to this postmodern dogma. Originally introduced as a term in the English vocabulary in the late sixteenth century as a technical term in painting, it denoted connotation to "scenery" and "picturesque image" – and, importantly, the emphasis was put on the cognitive and cultural representations and the main actors (painters/academics) were somehow outside and apart from the landscape (Hirsch 1995). Landscape was seen as a linguistic construction without environmental constraints; reality was a representation and not a real world of hunger, struggle and suffering. In other words, landscapes were constructed and controlled by humans and their free will where the relations between signs and signifiers were arbitrary (e.g. Saussure 1960, Barthes 1973). In a world of human significations, nature's constraints were vulgar, deterministic and irrelevant. Current studies of ontological relations and entanglements (e.g. Gell 1998; Hodder 2012; 2016; Olsen 2012; Robb 2004), for instance, are still within the postmodern paradigm (e.g. different kinds of agencies engaging in asymmetrical relations in various ways with human and non-human actors), albeit environments and ecologies are ascribed significance. Still, one needs another perspective if one attempt to study and understand prehistoric farming cosmologies, and

early Indo-European studies paved the way and ploughed the fields for such studies more than a century ago. Benoît Vermander writes:

> The development of "comparative religion" as an academic discipline from the mid-19th century onwards, the attention given to rituals and sacrifices in early anthropological studies, the fascination associated with endeavors such as Frazer's *Golden Bough* […] the role played by the study of folklore in asserting cultural and national identities, all contributed to the gathering of a vast array of material related to agrarian rituals, especially the ones centered on staple foods – cereals, mainly. […] Harvest festivals are often seen as constituting the climax or the exemplar of all agrarian rituals, an approach that needs to be qualified: in certain societies, rituals intervening before sowing or preparing the soil may be invested with particular importance, when such processes are loaded with danger (for instance, seeds may perish in cold climates). (Vermander 2021: 3)

Thus, a focus on seasons and seasonality probes to the heart of farming cultures and cosmologies. Homans says:

> Ritual actions do not produce a practical result on the external world – that is one of the reasons why we call them ritual. But to make this statement is not to say that ritual has no function. Its function is not related to the world external to the society but to the internal constitution of the society. It gives the members of the society confidence, it dispels their anxieties, it disciplines their social organization. (Homans 1941: 172)

From this perspective, one may approach parts of the ritualization and rationalization of a shared Indo-European ecology and cosmology.

An ecology of the mythology

There are innumerable popular presentations and compilations of the Norse sagas and myths. One such book is *Myths of the Norsemen: From the Eddas and Sagas* (1909) by Hélène Adeline Guerber (1859–1929). She was an American author born in Michigan to Swiss parents, but little is known about her life. Guerber wrote extensively about myths, including the Greek and Roman ones, and the particular intriguing aspect about the myths of the Norsemen is that the mythology is explicitly interpreted in an ecological perspective and more specifically in a pan-European or German framework. This European stratum of shared cosmological perceptions is evidently of great age and represents

Indo-European beliefs. Thus, in this analysis it is not the myths themselves that are of main interest but the nineteenth-century interpretative layer and horizon of understanding placing these gods and myths in an ecological perspective. All gods were ascribed with particular and specific weather phenomena and powers in nature; some were benevolent and fruitful; others were malevolent and fearful.

Light clouds were the works of Frigga. "Frigga was goddess of the atmosphere, or rather of the clouds, spinning golden thread or weaving long webs of bright-coloured clouds" (Guerber 1909: 42). Odin, on the other hand, embodied many facets and he appears with 204 names and forms (Price 2019: 62–68), which include strong winds and storms.

> Odin, as wind-god, was pictured as rushing through mid-air on his eight-footed steed. […] And as the souls of the dead were supposed to be wafted away on the wings of the storm, Odin was worshipped as the leader of all disembodied spirits. […] As the winds blew fiercest in autumn and winter, Odin was supposed to prefer hunting during that season, especially during the time between Christmas and Twelfth-night, and the peasants were always careful to leave the last sheaf or measure of grain out in the fields to serve as food for his horse. (Guerber 1909: 23; 25)

Moreover, we also meet Odin during the spring. "Until very lately there was always, on that day, a grand procession in Sweden, known as the May Ride, in which a flower-decked May king (Odin) pelted with blossoms the fur-enveloped Winter (his supplanter), until he put him to ignominious flight" (Guerber 1909: 38).

Thor was an ancient rain and thunder god, but he has also a fundamental role in fighting the winter. "Thor was the proud possessor of a magic hammer called Miölnir (the crusher) which he hurled at his enemies, the frost-giants, with destructive power" (Guerber 1909: 63). The fertility aspects are highlighted by his wife:

> Sif, Thor's wife, was very vain of a magnificent head of long golden hair which covered her from head to foot like a brilliant veil; and as she too was a symbol of the earth, her hair was said to represent the long grass, or the golden grain covering the Northern harvest fields. Thor was very proud of his wife's beautiful hair; imagine his dismay, therefore, upon waking one morning, to find her shorn, and as bald and denuded of ornament as the earth when the grain has been garnered, and nothing but the stubble remains! (Guerber 1909: 64)

It was Loki – the trickster – who cut the hair and hence made the earth infertile, in the same way that he enabled the killing of Balder, the god symbolizing the sun and the summer. There were also different gods and goddesses for fertility and nature's growth forces.

> Idun, the emblem of vegetation, is forcibly carried away in autumn, when Bragi is absent and the singing of the birds has ceased. The cold wintry wind, Thiassi, detains her in the frozen, barren north, where she cannot thrive, until Loki, the south wind, brings back the seed or the swallow, which are both precursors of the returning spring. The youth, beauty, and strength conferred by Idun are symbolical of Nature's resurrection in spring after winter's sleep, when colour and vigour return to the earth, which had grown wrinkled and grey. […] Idun's fall from Yggdrasil is symbolical of the autumnal falling of the leaves, which lie limp and helpless on the cold bare ground until they are hidden from sight under the snow, represented by the wolfskin, which Odin, the sky, sends down to keep them warm. (Guerber 1909: 109–110)

Intriguingly, not only is Frey the optimal combination of sun and life-giving rain during the summer but his animal, the wild boar, taught humans how to plough (Figure 2).

> Frey, or Fro, as he was called in Germany, was the son of Niörd and Nerthus […] the god of the golden sunshine and the warm summer showers. […] The dwarfs from Svart-alfa-heim gave Frey the golden-bristled boar Gullinbursti (the golden-bristled), a personification of the sun. The radiant bristles of this animal were considered symbolical either of the solar rays, of the golden grain, which at his bidding waved over the harvest fields of Midgard, or of agriculture; for the boar (by tearing up the ground with his sharp tusk) was supposed to have first taught mankind how to plough. (Guerber 1909: 117–118)

Different forces were at work during the winter, and it was always a battle between powers fighting each other. It is also symptomatic that, although all of these gods were powerful, even the mightiest were not almighty. Each year the summer died and inevitably the winter came – and during the midwinter solstice it was believed that even the sun stood still. Nature was not natural but spiritual, and the powers embodied and materialized specific physical weather phenomena. While the seasonality clearly showed regularity on a broad scale, there were always huge variation in weather, wind and water. The forces in nature were not only unpredictable but they were also largely uncontrollable by the gods themselves. In other words, no

Figure 2. Frey and wild-boar. By Jacques Reich (1852–1923). From: Guerber 1909: 118. License: CC-PD.

single ritual or sacrifice to a specific god would ensure and secure a good and bountiful harvest. There were too many forces and factors at work, and they were not always playing together for the betterment and best interest of humans.

An ethnology of sacrifices, fertility and inciting growth forces

Snorri Sturluson describes the great sacrifice of King Dolmade in Old Uppsala. After a year of hunger and famine, the chieftains decided to make sacrifices (Figure 3).

> In the first autumn they sacrificed oxen, but even so there was no improvement in the season. The second autumn they held a human sacrifice, but the season was the same or worse. But the third autumn [...] the leaders held a council and came to an agreement among themselves that their king, Dómaldi, must be the cause of the famine, and moreover, that they should sacrifice him for their prosperity, and attack him and kill him and redden the altars with his blood, and that is what they did. (Snorri 2011: 18)

This particular description of a cosmological sacrifice contains a wealth of knowledge about prehistoric rituals, ritualization and rationalizations. The natural world was a cosmic world empowered not only by divinities: humans could also intervene and impact on this balance between human and gods. Fundamentally, the gods controlled the weather and henceforth the outcomes of harvest. Humans could mitigate divine wrath by escalating and intensifying the sacrifices, which culminated with humans and ultimately the leaders of society

Figure 3. The sacrifice of Domalde in Old Uppsala. By Erik Werenskiold (1855–1938). From: Snorri 2011 [1899]. License: CC-PD.

as responsible for the health and wealth of all society's members (see Valeri 1985, Trigger 2003). Although Snorri does not describe the reasons why the divinities imposed calamites upon humans, Olaus Magnus gives a very vivid and detailed description in 1555 of the king's cruelty, which is worth referring to in length:

> I should like a similar cruelty to be noted, that of King Domaldi. […] His realm was suffering the severest ill fortune when his courtiers, coming together under pretence of protecting their country and the innocent, ostensibly declared themselves to be the servants of justice and fair play, when they were in fact the enemies of the citizens and of all probity and virtue. Whatever corn lay in any stores they set before their horses to be eaten up, while wretched parents saw their children die of hunger and starvation, since there was not enough corn for bread, and they themselves were compelled to give up the ghost along with their offspring. […] For this reason, when famine so sharply attacked not merely the realm of Gotaland but also Svealand, which had once teemed with everything required for human sustenance, the temple priests who served the idol of Odin at Uppsala propounded one, sole remedy against the imminent collapse of all the northern lands: that King Domaldi, being a hideous enemy of the human race, should be bound in chains and sacrificed at Uppsala to the goddess Ceres. […] Since this was delivered as if from a divine oracle, it was no sooner said than done. […] His death was followed by a corn harvest and an abundance of everything far and wide. (Magnus 1998[1555]: ch. 45, p. 460)

King Domaldi, as "a hideous enemy of the human race", letting horses eat the food of farmers so the children died of hunger, was a threat to wealth and health of all. Killing the cause was like treating cancer and a collective good. The important thing in this context is how the king and his cruelty also embodied and controlled the weather and the harvest. Also, Snorri points out that, after King Domalde was sacrificed, the son "ruled the domains for a long time, and there were good seasons and peace in his day" (Snorri 2011: 18). The bountiful harvests proved to the participants that the ritual and the sacrifice was successful. Order in culture and cosmos was restored.

The sacrifice of Domalde was triggered by a crisis: a famine causing hunger. All rituals are caused by a situation making ritual as an activity rational. "I consider ritualization as the process in which actions or reactions to specific situations make them distinct from ordinary situations. […] Every ritual performance is an act of ritualization that grows out of a situation, a *causa*" (Modéus 2005: 37). There are many

reasons for ritualisations and the most common cause in agrarian societies relates to cycles of nature, which trigger ritual responses aiming "to impose cultural schemes on the order of nature" (Bell 1997: 103). In short, agrarian rituals as part of the seasonal changes and cycle of nature are *proactive*: they aim to define the forthcoming year and successful harvest (Kaliff & Oestigaard 2022; Oestigaard 2022).

In an agrarian world in cold climates, it is precisely the continuity of life forces between the seasons that is emphasised in comparative Indo-European ethnology in Europe (Frazer 1890; 1912a; 1912b). "Cereal", writes Benoît Vermander, "refers to the Roman goddess Ceres, who was assimilated with the Greek Demeter as well as to local earth goddesses. […] Ceres reigned over the cycle of crop production and represented the generative power of nature" (Vermander 2021: 2). This is also manifested in continuity rituals and the powers of the last sheaf. During the harvest, the corn was cut and killed, but during the sowing and ploughing rituals in the spring life was transferred back to the soil. The celebrations and sacrifices during Christmas or the pre-Christian *jól* were essential in the corn-spirit's continuity through the winter and the darkest times, and these traditions are well documented among farmers in the Nordic countries (Nikander 1916; Celander 1920; Lid 1928; 1933; Nilsson 1936; Olrik & Ellekilde 1951). However, it was not sufficient to plant the grains in the soil if the fields were infertile. Thus, there were at least two processes at work in parallel. On the one hand, it was to ensure and safeguard continuity of growth and life forces between the seasons, and on the other hand it was to activate and incite the latent and potent life forces in nature covered by snow or frozen in ice (Figure 4).

The latter was also related to the sun and the darkest time of the year around Christmas. In Scandinavian peasant communities up to the early twentieth century it was generally believed that everything in culture and cosmos came to a standstill around Christmas. During midwinter solstice everything stood still by itself, and there were numerous taboos associated with this cosmic time of the year. Nobody should work and everything that could turn around and move should stay still, like grinding stones, spinning wheels, baking plates and wheels on wagons. Nothing should move, since this would contradict the laws of nature and cosmos (Olrik & Ellekilde 1951: 965–967). After the solstice, not only was the sun reactivated but everything had to be incited and activated again: this was not only a divine task but a human ritualization of growth and life forces. Throughout the Scandinavian

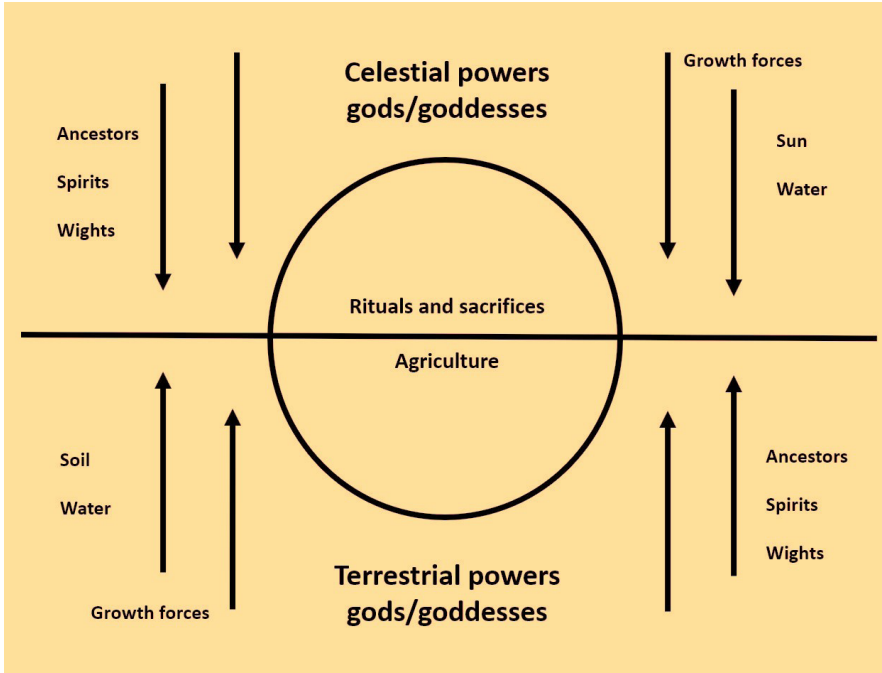

Figure 4. Terrestrial and celestial forces at work in agrarian cosmologies. Graphics: Terje Oestigaard © License: CC BY-NC.

countryside there are reports about farmers shaking their agricultural tools, stamping on the fields with a club on Christmas Eve, and preparing all wheels for the coming year. If this was not done properly, the forthcoming harvest could fail (Lid 1933: 39).

The ultimate growth forces came from water: the pre-industrial cosmology in rural Scandinavia was largely evidence-based in the sense that all farmers were well aware of how the growth forces worked in these northerly and harsh conditions (Figure 5).

Hyltén-Cavallius writes from Småland in Sweden that the oldest religious conceptions were personifications of external and natural phenomena (Hyltén-Cavallius 1863: §54, p. 230), like changing weather and observable forces in nature, for instance strong winds, whirlpools or waterfalls. Nature and differences in water and weather phenomena were ultimately proof with regard to how good and bad forces worked. Every farmer had witnessed this innumerable times, and hence it is no wonder that James Frazer's (1922) theory about sympathetic magic was largely developed and based on Indo-European practices in central and northern Europe, Scandinavia included. Like produces like

Figure 5. Growth forces living and manifesting themselves beneath the snow in early spring. Photo: Terje Oestigaard © License: CC BY-NC.

and by touching and imitating processes in nature farmers partook and activated and incited these life and growth forces.

In the cold north, the winter was the greatest challenge and hardship, not only for survival; it also determined the whole agricultural year: springs that were too long and cold or autumns that were too early and wet could jeopardize the harvest, with subsequent famine and hunger. Thus, the aim was to overcome and overpower the deadly winter, and the most powerful forces were seen in free-flowing water during the most enduring cold periods (Figure 6).

A *frobrunn* was a particular renowned spring or well with immense powers from beneath. The name literally means "froth well" or a frothing spring. "These were springs which never froze, or openings in the ice which kept open throughout the winter" (Solheim 1956: 153). Not only were they "eating" snow and frost from beneath and thereby manifesting and visualising the physical growth powers underground (Lid 1933: 40); the bubbles coming from the depths of these springs were also seen as embodiments of the living dead. They could be the souls of drowned people but also powerful wights or water spirits

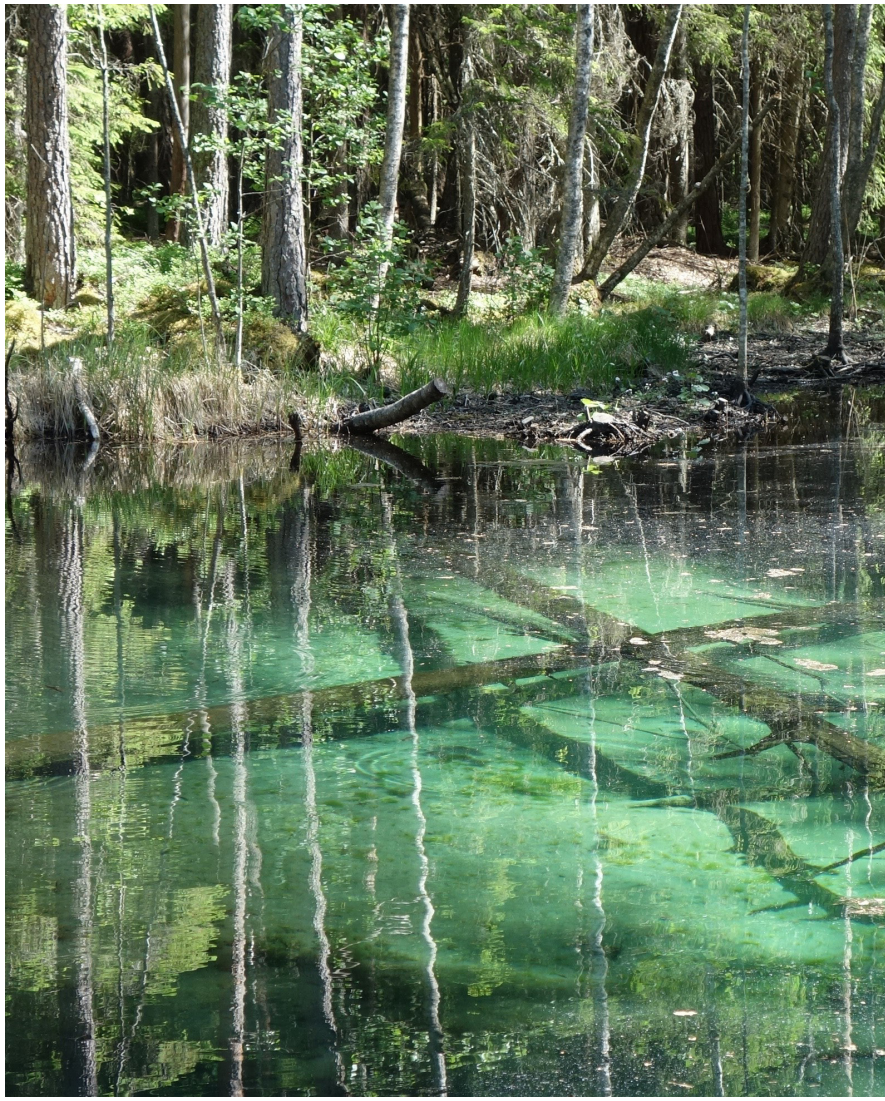

Figure 6. The never-freezing Ingbokällarna, Sweden. Photo: Terje Oestigaard © License: CC BY-NC.

(Reichborn-Kjennerud 1928: 17). Since this water was alive and bubbling up from beneath when all other types of water was frozen or dead, it was seen as "holy" and extremely powerful (Skar 1909: 45).

Although disputed and etymological uncertain (Vikstrand 2001: 175), it has been suggested that the prehistoric god Ull, with probable roots back to the Bronze Age, can be interpreted and seen as to "froth", "foam" or "bubble", like boiling (Elgqvist 1955: 39–50). Foamy rivers

or "to foam" is also an Indo-European feature found, for instance, in ancient Greece and, although the etymology and clear connection to divinities are discussed, the name of the "mother of all rivers [is probably] 'foamy-ness, seething-ness' (personified as a deity)" (Ginevra 2020: 102).

Across time and space in different Indo-European cultures and traditions on the European continent there are obviously great variations, but it seems certain that these powerful water manifestations in nature were divine openings where underground forces made themselves visible and accessible to humans and their needs. These life-giving growth forces could be ritually activated and incited by humans in seasonal rites, and these were mainly related to the winter: the harvest (end of summer and beginning of winter), midwinter and sowing and ploughing (end of winter and beginning of summer) (Kaliff & Oestigaard 2022).

Cattle and snakes

A central Indo-European ritual has been horse fights and competitions in various forms, which in Scandinavian traditions are known as *skeid* (Kaliff & Oestigaard 2020). The last historic trajectories were documented as late as the early twentieth century in the Scandinavian countries, and in particular the horse races around Christmas and more specifically early in the morning of 26 December were a cosmogonic ritual (Skar 1909; Solheim 1956; Stylegar 2006). "People rode or drove out to water the horses in so-called fro-brunnar, special springs or special places at rivers or lakes. These were springs which never froze, or openings in the ice which kept open throughout the winter," Solheim writes.

> The water in these springs was thought to be especially powerful and health giving. When the horses got to drink this water on the morning of the second Christmas Day, they were supposed to thrive and become especially healthy. People competed to come first to the springs, for then the water was thought to be best. The competitions often turned into fight. (Solheim 1956: 153)

Importantly, it was believed that the ones who won the race – watering the horse in the well and being first back to the farm – would have the earliest and best harvest in the coming season (Wéssen 1922: 17; Lid 1933:40, see Kaliff & Oestigaard 2020: 183–214). Horse fights and races to foaming wells and springs were fertility rituals activating

the new year and inciting the agricultural growth forces, and it was believed that these rituals during the midwinter would "eat" away the snow.

Although the *skeid* ritual with horses is historically the most famous, Frans-Arne Stylegar (2013) points out that the *skeid* phenomenon includes a broad spectrum of rituals. In particular, in the coastal areas in Southern Norway, cow-*skeid* has been common. Stylegar writes:

> In the cattle breeding inland region from Jæren in the west to Telemark in the east a particular type of skeid was practiced until the late 19th century. In these areas the cattle was kept in stables during the cold, snowy winters. When the cattle was let loose in springtime, the farmers had their bu-skeid (cow-skeid), i.e. they let the animals fight each other to decide which cow was to be this year's bu-konge (cow-king). These cow-fights are best known from Sirdal, an inland valley between the countnies of Rogaland and Vest-Agder.
>
> Some cows were really wild. One cow in particular was traded from one farmer to the next, and this animal butted several others to death. Still, it gave prestige to own this cow. Especially the men from the Virak farm in Sirdal were known to travel long distances to acquire wild cows with big horns. The bu-konge had to be big, strong, and brave – and preferably have a set of horns sharp as knives. As long as the cow matched these demands, it did not really matter whether or not it was a good milk cow. (Stylegar 2013: 451)

The owner of the wildest and fiercest cow was renowned and it was prestigious to have the strongest animal. If the animals fought against each other and the farmers could not agree upon which animal was the strongest, the farmers could settle the dispute themselves with knifes and fists, and booze was obviously inciting the male combatants. While (drunk) fighting today is not seen as a particularly religious practice or a homage to god, there is logic behind all these farming practices that had a continuity into the twentieth century.

Nils Lid points out the cosmogonic structures behind these ancient traditions, which belongs to Frazer's (1922) sympathetic magic. The ultimate aim was to incite the forces in nature that could overcome and overpower the winter. All fighting and inciting were an aim in itself: all life and growth forces had to be activated – through rituals, races or simple fights. Although these traditions were also festivities, entertainments and carnivals, behind the surface there was a religious structure and logic (Lid 1933: 39–40).

The fertile and procreative aspects of cattle were especially emphasised when the animals were let loose in springtime after a long winter. In some places, the milkmaid stood high up on ladders in the doorway in the barn and the cattle had to pass through her thighs as if she were giving birth to the animals (Olrik & Elleklide 1951: 1160–1161). In the southern areas in Norway where the tradition with cow fights and "cow-kings" was strong, cows were also fed with snake heads believed to have healing and strengthening powers (Stylegar 2013: 451). Ideally, it was a grass snake and the first snake spotted on the melting ice in springtime; alternatively the cattle should be fed with the old Christmas bread the day they were let loose (Nikander 1916: 225; Olrik & Ellekilde 1951: 1157–1160). The snakes were closely associated with the ancestors and the life-giving forces in nature and underground (Østigård & Kaliff 2020). The cow's ritual meal consisting of the Christmas bread is particularly interesting, because it directly relates to Frazer's interpretations of the last sheaf (Frazer 1890; 1912a; 1912b). In the Scandinavian tradition, the continuity between the seasons through the midwinter sacrifices and celebrations (including Christmas or *jól*) was explicitly manifested in the Christmas bread. It was made by the last sheaf and the last grains harvested and the bread should lie uneaten on the Christmas table throughout the celebration. The last sheaf contained the harvest's growth powers, and during sowing and ploughing the ploughman should eat parts of the bread and give some pieces to his horse and other animals, and the rest should be ploughed into the fields when the grains were sowed (Lid 1928: 70–71, 80). The ancestors and growth forces gave new life and harvest in yet another season and, as has been said in another context, ploughing "is the penetration of man into the sacred world, that is to say the unopened world" (Servier 1951: 184).

Indo-European tradition in Bronze Age Sweden

In the last decades in the Mälardalen region in central Sweden, large contract archaeological excavations have revealed astonishing results and Sweden's hitherto largest cult sites from the Bronze Age have been documented. There is a concentration and intensification in agriculture and domestication of new lands in the Late Bronze Age (from 1100 BCE onwards). This is also the era of Håga (Figure 7), located some kilometres outside Uppsala, where Scandinavia's northernmost oak-log coffin is found (Almgren 1905; Kaliff & Oestigaard 2018), and the

Figure 7. The Håga mound covered in snow, 6 January 2022. Photo: Terje Oestigaard © License: CC BY-NC.

grave is the richest in gold in the whole of Scandinavia: about a third of all gold and gold fragments found in Sweden's 1,300-year-long Bronze Age period is found in Håga (Eriksson 2008). The Håga mound was built around 1000 BCE. The main sacrificial animal there was cattle

and, apart from remains of three humans external to the main deceased who was cremated, bone remains have been found of six or seven cattle, five or six sheep, one or two pigs, and dogs, among other species (Johnsen & Welinder 1993). Håga was excavated in 1902–1903, and based on this investigation it is difficult to say anything specific about cultivation, although there are agricultural fields, farms and living areas in the vicinity. The sacrificial animals in the mound indicate an emphasis on pastoral animals, from cattle to sheep and dogs guarding the herds (see Oestigaard 2022).

The Bronze Age cult site Skeke in Rasbo, Uppland, with an intensive phase in the first part of Late Bronze Age, shows a combination of pastoralism and cultivation (Artursson, Kaliff & Larsson 2017). Outside one of the cult houses, there was a closed cooking pit with a boulder on top. The cooking pit contained not only remains of cattle but also bones from wolf (or dog), and the combination cattle–wolf/dog indicates a holy meal and communion in a pastoral cosmology (Larsson 2014: 170, 298, 318; Kaliff & Oestigaard 2022). On the other hand, there were also found numerous grinding stones in the graves at Skeke (Artursson et al. 2017: 104), and the combination of ground bones and grains is a ritual phenomenon that is found in many Bronze Age contexts and cemeteries (Kaliff 1997; 2007). Moreover, cremated bones are commonly found in agricultural fields, among other contexts, and it seems that cremated bones have been deliberately ground and spread as fertilising ashes on the fields, not as manure but for the purpose of human life and fertility: ancestral growth powers (Kaliff & Oestigaard 2004; 2017).

In 2007 Nibble in Uppland, one of Sweden's largest Bronze Age cult sites, was excavated. The main ritual phases were dated to *c.* 900–700/600 BCE and centrally located on a site where there was a spring still flowing from underground. This cosmic spring seems to have been a founding well at the site (Artursson, Karlenby & Larsson 2011). In one of the cult houses a big stone labelled an "altar" was found, with flat sides measuring 1.90 × 0.90 × 0.75 metres and a weight of about two tons. The stone was slightly curved and it was clear that it had been used as a grinder. In the layers and pits below the stone there were numerous remains of ground items, including grains, but also burnt bones from sheep and humans, including a burnt fragment of a human skull. Thus, it seems that the stone had an "altar" function where grains and cremated bones, and perhaps more specifically human skulls, were ground and made into a holy meal (Artursson 2011: 298–309; Karlenby

2011: 141–143). This interpretation was strengthened by another find in a depositional pit measuring *c.* 6.4 × 5.5 metres with a depth of 0.38 metres. After the use-phase was completed, the pit was closed with an estimated five- to eight-ton heavy stone. The debris and food remains in this pit were intriguing. Human remains were found scattered with other deposits. In general, human remains found at Nibble had an average of 2.7 grams, but the human remains in the garbage pit were significantly smaller and on average only 0.6 grams. Thus, the bones in the pit had been ground much finer and better than all the other human bones, and they were deposited with other remains from cooking of meals. The fact that this pit was closed after the preparation of the meal was completed, with a stone weighing several tons, indicates that this was not an ordinary and profane meal (Larsson 2011: 411–412).

The great Håga funeral and mound, dated to *c.*1000 BCE, including some century older remains of humans and animals, and all the other large Late Bronze Age cult sites in Mälardalen, fit into an overall picture of Indo-Europeanisation and intensive phase of expansive agriculture and domestication of the landscape in this area. Agriculture was introduced in Sweden around 4000–3800 BCE and the secondary product revolution with extensive pastoralism became dominant around 3000–1500 BCE. Stig Welinder writes:

> [I]t would seem that agriculture in the period 1200–800 BC was the wholly dominant way of life as far north as present-day Västergötland and Uppland. […] The advent of historical farms, 1000–800 BC. Over the course of a couple of centuries, farms began to be built with outbuildings, sometimes with byres. They had cleared, permanent, manured fields. The innovations of the previous millennia came together in an effective whole, helped along by iron tools, which were first manufactured at this point. (Welinder 2011: 23, 43)

Thus, the historic developments in Mälardalen are part of both an expansive phase of intensive agriculture and the advent of the historic farm, as well as Indo-European processes in time and space.

Dating traditions and discussion

There can be no doubt that the ecology has been a vital and fundamental parameter in all Scandinavian societies throughout history, and in particular the winter has been the greatest challenge in agricultural and pastoral communities. The length of the winter determines the growth

Figure 8. Fertile fields in the Håga Valley, Uppsala. Photo: Terje Oestigaard © License: CC BY-NC.

season, and cattle and domestic animals cannot live unprotected outdoors without human support and secure supplies of fodder in cold winter environments. As seen with the Norse mythology, there was a shared Indo-European stratum of common conceptions in Europe seeing divinities and deities in an ecological perspective (Figure 8). The world and changing weather phenomena understood as fights between benevolent and malevolent forces in the cosmos could explain the dramatic and seasonal changes in nature. On the one hand, there were no almighty gods, but on the other hand there were powers and forces everywhere in nature, which could be propitiated, activated and incited. The sacrificial year and ritual practices were fundamentally structured around the waning and waxing growth forces. The ethnographic material and the ritual practices documented in Europe by Frazer and others by the end of the nineteenth century and beginning of the twentieth clearly support this interpretation. The challenging question is how far back in time it is possible to trace parts of this cosmology and mythology.

In studies of "deep" oral history, it is generally agreed that memories of particular events or persons seldom survive more than 500–800

years because the information becomes so distorted after intergenerational transmissions that the original content is lost. However, the theoretical foundations for these assumptions are not always clear or convincing, and new studies have opened up avenues and approaches conceptualising greater time depths and continuities, like Aboriginal memories of a great inundation 7,000 years ago (Nunn & Reid 2016) or 5,000- to 6,000-year-old Indo-European stories (da Silva & Tehrani 2016). Questions about continuity and change are fundamental in all archaeological research, but often change is seen, at least implicitly, as more natural and obvious than continuity, since change implies notions of "development and progress" and continuity "stagnation". However, in many cases it can be the opposite, as Roy Rappaport points out, and the crucial question is "What does this change maintain unchanged?" (Rappaport 2001: 7).

If an ecological adaption works and the cosmological worldview explains why and how the world, gods and humans function and relate to each other, and the rationalisations and ritualizations of this religious system have constituted all major and seasonal celebrations and the sacrifices have largely proved successful in the memory of mankind, there are more reasons to preserve the system than to change it. If there are changes, the aim is to maintain the tradition unchanged, and this is a probable scenario in many prehistoric cosmologies in relation to changing ecologies. From this perspective, it is possible to put a tentative date on some of the fundamental agrarian rites and Indo-European traditions in Scandinavia. While there were changes on the surface – gods changed names and forms – there were still structural continuities with regard to inciting growth forces of grain and cattle, the foaming waters and the holiness of the wells – *frobrunn*. The ritual year was structured around continuity between the seasons and the life-giving powers and spirits in the last sheaf, and harvesting and sowing and ploughing rituals and sacrifices. These Indo-European practices and perceptions seem to go back to at least the beginning of the Late Bronze Age in the agricultural areas of Scandinavia. In other words, they are at least 3,000 years old.

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7. A tiny Indo-European 'cow-suckler'? A new etymology for Breton *buzhugenn*, Middle Cornish *vethygan* and Gascon *bousic*, *boudic* 'earthworm'

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Abstract

This chapter argues for the existence of a Celtic reflex of Proto-Indo-European *$g^{w}o\underset{\sim}{u}$-$d^{h}Vh_1$- 'cow-suckler; chthonic creature', a reconstruction otherwise posited on the basis of Vedic *godhā́*- 'monitor lizard', Latin *būfō* 'toad' or 'some kind of rodent' and Armenian *kovadiac*^{c} 'lizard'. Celtic is argued to have formed a diminutive derivative *$bo\underset{\sim}{u}d$-*īko*- (< "*$g^{w}o\underset{\sim}{u}$-$d^{h}h_1$-*iko*-"), originally 'little cow-suckler', with reflexes in Breton *buzhugenn*, Middle Cornish *vethygan* and Gaulish *$bo\underset{\sim}{u}dīko$- (→ Gallo-Romance *$bọ^{\mid}ðikọ$-, reflected in Gascon *bousic*, *boudic* and Saintongeais *bouic*), all with the meaning '(earth)worm'. The Celtic derivative *$bo\underset{\sim}{u}dīko$- is closely paralleled both formally and semantically by Dardic and Nuristani reflexes of Indo-Iranian *$ga\underset{\sim}{u}d^{h}ăH$- and its diminutive *$ga\underset{\sim}{u}d^{h}(H)ikaH$ (< *$g^{w}o\underset{\sim}{u}$-$d^{h}h_1$-*ikeh*$_2$), also with the meaning 'worm'.

1. An Indo-European 'cow-suckler'[1]

There is a widespread and well-attested belief across Europe that certain animals may steal milk by biting or suckling the udder of cattle (or other

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dairy-producing livestock).[2] The animals responsible for this vary, but it is typically "chthonic" and often nocturnal animals who are believed to present this behaviour, especially snakes, toads and lizards. Apart from direct descriptions of the beliefs (in e.g. Svanberg 2003: 150–151; 2009: 57–59; Būgienė 2011; Ermacora 2017 and in this volume; Larsson in this volume), the idea that chthonic creatures may suckle the udders of livestock is evident from designations for specific animals that literally translate to 'cow-suckler' or the like (see Martirosyan 2010: 797–798; Witczak 2020[3]), e.g. Alb. *thithëlopë* 'toad' (lit. 'suckle-cow'), Ukr. молокоси́с *molokosýs* 'spotted salamander' (lit. 'milk-suckler'; see Boldyrev et al., 1989: 504), Arm. *kov(a)cuc* and *kovadiac*^{c} 'a kind of lizard' (lit. 'cow-suckler'; on the latter, see Section 2.3 below), Ved. *godhā́-* 'monitor lizard' (lit. 'cow-suckler'; see Section 2.1 below).[4] At times this belief may involve animals one might not typically designate chthonic. Thus, in Northern and North-Western European folklore, the 'milk-stealer' is often a (supernatural) hare or cat-like creature (Wall 1977–1978 for Scandinavia; Stifter 2021 for Ireland), whereas Greek αἰγοθῆλας and Latin *caprimulgus*, lit. 'goat-suckler', refers to the nightjar, a nocturnal bird.

The belief in cow-suckling, chthonic animals among speakers of Indo-European languages may at least in part be inherited from a shared proto-stage rather than a purely areal phenomenon. The reason to consider this is primarily linguistic. We appear to find reflexes in several daughter languages of a non-trivial compound that, judging by its constituent lexical elements, should mean 'cow-suckler'. However,

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[2] This belief may at first sight seem bizarre. However, without an understanding of bacteria and infection, it would be a reasonable conclusion that sores on the udder and blood and pus in the milk be explained as the result of contact with chthonic creatures, some of which were venomous (e.g. snakes) or poisonous (e.g. toads).

[3] Witczak (2020) interprets Hitt. *akuu̯akuu̯a-* of unknown meaning (presumably designating some chthonic animal with suggestions ranging from 'frog', 'toad' to 'mole' and 'spider') and the (Luwoid?) variant *auu̯au̯a-* 'id.'(?) as deriving from a compound of **h₁eg*^{wh}- 'to drink' and *g*^{w}*ou̯-* 'cow', though in this case a reduplicated formation and possibly onomatopoeic origin may be more likely. Witczak (ibid.) also interprets Lith. *žaltỹs, žalktỹs* (dial.), Latv. *zaĺktis*, *zaĺtis* (dial.) '(grass) snake' as deriving from **ĝalh₂kt-iu̯o-* '(one associated with) milk' (see also Gr. γάλα, γάλακτος 'milk') instead of the commonly accepted derivation from the colour adjective seen in Lith. *žãlias* 'green'.

[4] One could even consider interpreting **Hógʷʰi-* 'snake' (Gr. ὄφις, Ved. *áhi-*, YAv. *aži-*) as an agent noun **h₁ógʷʰ-i-* 'drinker' derived from the root **h₁eg*^{wh}- 'to drink' (see Hitt. *ekuzi/eukzi*, Tokh. B *yokäṃ*; LIV 231), a taboo replacement of an older word for 'snake'.

the compound does not mean this in the attested languages but rather refers to various chthonic animals. The etymology goes back to Fick (1891: 321):

> Lat. *bûfô* lässt sich bis auf die endung mit s. *godhâ* ‚eine grosse eidechsenart' identificiren. Die *godhâ* heisst gewöhnlich *go-sarpa* ‚kuhschlange', wird also eine art blindschleiche, ungiftige schlange sein. Mir scheinen *go-dhâ* und lat. *bû-fô* aus *go* = *bô-s* und *dhâ* = lat. *fê* ‚saugen' zusammengesetzt zu sein und ‚kuhsaugend' zu bedeuten. Dem *żaltýs*, der grossen bruchschlange, sagt man (nach Nesselmann Lit. wb. unter *żaltis*) in Litauen nach, dass sie den kühen die milch aussaugt.

In modern notation this would be reconstructed as $*g^{w}o\underline{u}\text{-}d^{h}Vh_1$-, a verbal governing compound consisting of the root noun $*g^{w}o\underline{u}$- 'cow'[5] (reflected in e.g. Skt. *gauṣ*, Gr. βοῦς, Lat. *bōs*, OIr. *bó*, ON *kú*,) as the first member and the verbal root $*d^{h}eh_1(\underline{i})$- 'to suckle' (reflected in e.g. the nasal present Skt. *dhinoti*, MBret. *denaff* 'to suckle' < $*d^{h}i\text{-}ne\text{-}h_1$-) as the second member.

2. The attested forms

In the following sections, I will give a brief overview of the attested forms underpinning the Proto-Indo-European[6] reconstruction.

2.1. Vedic *godhā́*- 'monitor lizard'

Vedic *godhā́*- 'monitor lizard' is pivotal for the Proto-Indo-European reconstruction. It is fairly well attested and survives into Classical Sanskrit and Modern Indic languages. The Nsg. of *godhā́*- shows no contraction with the following *a*- in RV 10, 28, 11, *tébhyo godhā́ ayátham karṣad etát* "the monitor-lizard will plow *this* way for [them]" (translation by Jamison & Brereton 2014: 1420). This form is resolved to *godhā́ḥ* in the Padapāṭha and taken by Lüders (1942: 43) as a survival of an athematic stem, i.e. what would directly reflect a PIE Nsg. $*g^{w}o\underline{u}\text{-}d^{h}Vh_1\text{-}s$. Elsewhere, *godhā́*- has been transferred

[5] Alternatively $*g^{w}eh_3\text{-}u$-. The exact reconstruction should not affect the argument presented here.

[6] Proto-Indo-European is used here for the reconstructed starting point. Strictly speaking, however, a reconstruction based on Indo-Iranian, Italic, Armenian and Celtic will, if accepted, only take us as far back as Core Indo-European (Indo-Celtic).

to the feminine *ā*-stems. Hence it is reasonable to assume that *godhā́-* originally was inflected like other compounds whose second member originally ended in vowel + laryngeal, e.g. *vasu-dā́-ḥ* 'giving wealth', *go-pā́-ḥ* 'herdsman'.

The precise meaning of *godhā́-* in Sanskrit was investigated by Lüders (1942: 23–50). After a very detailed treatment of the attestations in Vedic and Classical Sanskrit, Lüders settles for 'monitor lizard'. This is supported by the fact that the word has numerous reflexes in Modern Indic languages largely with the same meaning. Lüders (1942: 35) furthermore discusses the diminutive formation seen in Skt. *godhikā*, designating a smaller variety of lizard. This derivative is also found in the compounds *gṛha-godhikā*[7] and *āgāra-godhikā* 'little house-*godhā*', presumably referring to the 'house gecko'.

However, the meaning of *godhā* and *godhikā* in the Modern Indic languages is more varied than the Sanskrit attestations would lead us to expect. In several Dardic languages the meaning is not 'lizard' or 'gecko', but rather 'snake' or 'worm; bug'. For instance, Kalasha-mun *gok*, the cognate[8] of Skt. *godhā*, means 'snake' and *góhik, goík*, the cognate of Skt. *godhikā*, is used both specifically for 'worm', as in *phaw goik* 'earthworm' (*phaw* 'earth, soil'), and in a broader sense to cover all sorts of insects and reptiles (Trail & Cooper 1999: 108). Elsewhere in the Dardic languages we find the latter meaning, 'worm, bug', for the reflex of *godhā* (Turner 1966: item 4104), e.g. Khowar *goγ* 'bug, insect, worm' (Morgenstierne 1973b: 263), Phalula *gr^{b}ōk* (Morgenstierne 1941: 36), *ghroók* 'worm' (Liljegren 2019 s.v. *ghroók*, with intrusive *-r-* and leftward shift of aspiration) and Dameli *gu^{l}ak* 'worm' (Morgenstierne 1942: 169).[9] There are also reflexes in the Nuristani languages with the same meaning, e.g. Ashkun *gǭk* 'worm', Kalasha-ala (Waigali) *gōk* 'id.' (Turner 1966:

[7] The alternative form *gṛha-golikā*, *-golaka-* probably shows influence from Skt. *gaulī-* 'a small house lizard', which in turn is most likely borrowed from Dravidian (Turner 1966: item 4324; Mayrhofer 1992–2001: III.166), see also Kannaḍa *gavuḷi*, Tamil *kavuḷi* 'lizard', Telugu *gauḷi* (Burrow & Emeneau 1984: 124).

[8] The Dardic and Nuristani words given here have been secondarily enlarged with the semantically vague denominal suffix *-k*, here possibly with diminutive meaning.

[9] The meaning 'lizard' is also encountered in Dardic, as in Pashai *go:* 'lizard', Gawar-Bati *go:wə* 'id.' (Morgenstierne 1956: 66), Indus Kohistani *ghű*, *ghő*, *ghű* 'a big lizard (monitor)' (with leftward shift of aspiration; Zoller 2005: 155). Interestingly, these lack the additional *-k* and it is therefore possible that we may ascribe a diminutive function to the suffix in these words.

item 4104; Degener 1998: 434),[10] Prasun *wulug* 'id.'[11] (Buddruss & Degener 2015: 840). Only Kalasha-mun appears to show distinct reflexes of Ved. *godhā́-* (Kal. *gok* 'snake') and the diminutive *godhikā* (Kal. *góhik, goík* 'worm; bug'), whereas other Dardic and Nuristani languages only preserve a reflex of *godhā́-*, with the meaning 'worm; bug' (and in some varieties 'lizard'). It is possible, as suggested to me by Samopriya Basu (pers. comm.), that Kalasha-mun preserves the original state of affairs ('snake' → diminutive 'worm') and that the situation elsewhere represents a later merger of the two very similar words, with the meaning of the diminutive *godhikā* 'worm' prevailing.[12] It then remains an open question whether the meanings found in Dardic and Nuristani languages derive independently from an original 'cow-suckler, chthonic creature' or if they came about through a later semantic shift from 'monitor lizard; small lizard, gecko', the established meanings of Skt. *godhā́-* and *godhikā*.

As for the further etymology, it is, in light of the numerous examples where chthonic creatures are referred to as 'cow-sucklers' (see Section 1 above), overwhelmingly likely that such a motif is also behind Ved. *godhā́-* (*pace* Scarlata 1999: 191–193). However, since *godhā́-* is still more or less synchronically transparent in Vedic Sanskrit, it cannot by itself be used by itself to argue for the existence of an earlier tradition.

2.2. Latin *būfō* 'toad' or 'some kind of rodent'

The second piece of evidence adduced by Fick (1891: 321) is Latin *būfō* 'toad'. This is a *hapax legomenon* in Classical Latin, being attested only in Virgil (Georg. 1.184), where it refers to an animal living in holes that disturbs the farmer's work. It must have been an at least regionally common word in light of the fact that we find reflexes of it in

[10] These words were previously taken to be cognate with Skt. *gavedhuka-* 'a kind of snake' (thus Turner 1966: item 4104 and Morgenstierne 1973b: 263), an etymologically obscure word attested in the medical treatise *Suśrutasaṃhitā* (Mayrhofer 1992–2001: III.156). However, as argued convincingly by Morgenstierne (1956: 66; 1973a: 102), it is much more likely that Khow. *goy*, Kal. *go|hik* 'worm', etc. are cognate with Skt. *godhā-* 'monitor lizard' and *godhikā-* 'gecko', respectively (Turner 1966: item 4286).

[11] This etymology was suggested to me by Samopriya Basu (pers. comm.). For the phological development compare Prasun *ülüm, ülyum* 'wheat' (Buddruss & Degener 2015: 534), the cognate of Skt. *godhūma-* 'id.'

[12] The opposite development, a generalization of the diminutive form with the meaning of the base word, is found in e.g. Nepali *gohi, guhi, goi* 'crocodile', Odia *gohi, goi, gui* 'monitor lizard' (Turner 1966: item 4286.2).

the later Romance languages. Traditionally, it has been assigned the meaning 'toad', partly based on the context in Virgil and partly inspired by the existence of words with a similar meaning in Medieval Latin, Old Italian and Old Occitan (though some of these may be learned borrowings from Latin). Thus we find Medieval Latin *hic biffo* gl. *lo rospo* 'the toad' (fourteenth century), Old Italian *bufo* (1364; apparently continuing an *o*-stem rather than an *n*-stem) and *bufone* (1342) and Old Occitan *bufo* (an *n*-stem) 'toad' (LEI 7: 1414–1415). In Modern Italian we also find *buffa* 'frog; toad' (LEI 6: 429–430). These all align with the meaning traditionally assumed for Latin *būfō*. However, as remarked by Leumann (1960; see also Adams 2007: 437), it is not at all certain that Virgil's *būfō* actually has the meaning 'toad'. The attestation in Virgil, where *mūs* 'mouse', *talpa* 'mole' and *būfō* are mentioned in succession, leads Leumann to suspect that *būfō* instead refers to some kind of rodent, a meaning that is also ascribed to it in glossaries. And, indeed, a Romance reflex providing a much better fit for the context in Virgil, 'some kind of rodent', is found, namely in Gascon and Béarnais [ˈbuhũ], [ˈbuhᵊ] (FEW 1: 599; ALF map 1286) and Catalan [buˈfo] (ALDG map 1617, pt. 116), with the meaning 'mole'. These may continue the Latin Asg. *būfōnem** regularly. As argued below in Section 3, a semantic shift from 'toad' to 'mole' is not in itself impossible but it remains likely that the meaning 'toad' applied to Lat. *būfō* is simply due to a misinterpretation of the passage in Virgil. The question is further complicated by the existence of similar words in the same semantic field, i.e. Latin *būbō* 'owl', Italian *buffa* 'frog; toad' and various Italian dialect words for buzzing insects, *bufón* 'hornet' (Garbini 1925: 327), *bofóne* 'rose chafer' (ibid.: 1195), *buffóne* 'cockchafer' (ibid.: 1430). However, even if we cannot exclude an etymological connection between these and *būfō*, as argued by Ronzitti (2011: 13–63[13]), such words are better kept apart in this discussion, since they may equally well be onomatopoeic.

On the formal side, a comparison with Ved. *godhā́-* requires that *būfō* entered Latin from a rural Italic variety (Adams 2007: 437), with initial *b-* from PIE *$*g^w$-* (cf. Lat. *bōs* 'cow') and medial *-f-* from PIE *$*-d^h$-* (cf. Lat. *rūfus* 'red'). This is hardly an insurmountable obstacle and the etymology will be tentatively accepted going forward. As for the Latin *n*-stem, it is possible to interpret it as an individualizing

[13] Ronzitti (2011: 61) instead allows for all the meanings attested, 'toad', 'mole', 'insect' and 'owl' to be original, under the assumption that 'milk-suckler' originally could refer to a whole range of animals.

formation, possibly based on a thematic adjective *$g^{w}o\underline{u}$-$d^{h}h_{1}$-*o*- 'cow-suckling' → *$g^{w}o\underline{u}$-$d^{h}h_{1}$-*o*-*n*- 'a cow-suckling one' (as suggested by Birgit Anette Olsen, pers. comm.). Alternatively, Specht (1944a: 217) assumes that a Nsg. *$g^{w}o\underline{u}$-$d^{h}\bar{o}h$-*s* first caused the word to be transferred to the feminine *ō*(*i̯*)-stems and from here, when this type was lost, to the Latin *n*-stems.

2.3. Armenian *kovadiac*^{c} 'lizard'

The third word underpinning the reconstruction of PIE *$g^{w}o\underline{u}$-$d^{h}Vh_{1}$- 'cow-suckler' is Armenian *kovadiac*^{c} 'lizard' (see HAB II.639; Martirosyan 2010: 372–373; 2013: 103). While *kovadiac*^{c} contains the same etymological elements as Ved. *godhā́*-, there are a few complications that need to be addressed. First of all, it is formed with the productive composition vowel *-a*-, which means that it must have been perceived as a nominal compound well into the prehistory of Armenian. Furthermore, the suffix *-ac*^{c} has been added (cf. Arm. *stndiac*^{c} 'baby', consisting of *stin* 'breast' and *-diac*^{c} 'suckler'). In spite of these obstacles, it is conceivable that *kovadiac*^{c} ultimately continues a PIE *$g^{w}o\underline{u}$-$d^{h}eh_{1}$- 'cow-suckler', showing the similar semantic narrowing to a specific chthonic animal as Skt. 'monitor lizard' and Latin 'toad' or 'some kind of rodent'. However, given the continuing existence of the constituent parts of *kovadiac*^{c} in Armenian, a more recent formation cannot be ruled out.

3. The semantic range

If we want to argue for the existence of a PIE *$g^{w}o\underline{u}$-$d^{h}Vh_{1}$- we face an obvious obstacle, namely the semantic difference between the potential reflexes. One may wonder if an etymology linking a word meaning 'lizard' to another meaning 'toad' or even 'mole' is credible. One reason for maintaining the connection could be that the word did not mean either of these things in Proto-Indo-European but rather was a more generic term for 'chthonic creature' believed to be stealing milk from cows by suckling their udders. Their perceived and actual behaviour and habitat may have been sufficient to early speakers of Indo-European to group these animals together, as animals of the "milk-stealing" and "cow-suckling" kind. At later stages in the individual branches, the reflexes may have been assigned to specific animals.

Another way of accounting for the semantic range of the reflexes of *$g^{w}o\underline{u}$-$d^{h}Vh_{1}$- may present itself when we turn to other words

designating specific chthonic creatures. We can often observe surprising shifts within this semantic field, with a word usually being used for one type of animal being used for a completely different animal (in the Linnaean sense). Apart from the *possible* shift from Latin 'toad' to Occitan and Catalan 'mole', one can point to the various reflexes of Lat. **(g)līrōnem* 'dormouse' (CLat. *glīs*, *glīris*) in Gallo-Romance. Here we find not only the expected Fr. *liron* 'dormouse' (FEW 4: 155) but in dialects *liron* 'toad' (Charente; FEW 21: 263), *liroun* 'grass snake' (Gascogne; FEW 21: 261) and *liron* 'maggot' (Berry; FEW 21: 273). Likewise, the etymologically obscure [simũ] 'shrew; water vole' (Haut-Dauphiné; FEW 21: 214) is probably the same word as [simu] 'toad; tree frog' (Haute-Vienne; FEW 21: 263), both apparently deriving from a Gallo-Latin **sīmōnem*.[14] Outside Gallo-Romance one can mention, for example, Russ. я́щур *jáščur* 'a kind of mouse or dormouse' and Pol. *jaszczur* 'salamander' of unclear origin and MidArm. *xlēz* 'lizard' with a dialectal Modern Armenian meaning 'snail' (Martirosyan 2010: 762). One could even consider deriving PCelt. **gelu-* 'leech' (OIr. *gil*, ModW *gelau*, OCorn. *ghel*, MBret. *guelouenn*) from PIE **g^{h}eluH-* 'tortoise' (Gr. χέλῡς, Russian Church Slavic *žely*), although one might have to resort to unattested intermediate semantic steps in this case ('snail'?).

Admittedly, once we accept that designations for "chthonic creatures" need not refer to a specific animal but may either be more general terms or be applied seemingly almost at random to specific animals within the category, the possibility of chance matches between languages is increased due to the lax semantic matches required. Nevertheless, the relatively long string of potentially matching phonemes involved in the reconstruction **g^{w}ou̯d^{h}(V)h$_1$-* and the overwhelming later evidence for the belief that chthonic creatures may suckle the udders of the livestock and steal their milk (Ermacora 2017) is sufficient to at least entertain the possibility that the reconstruction is valid for Proto-Indo-European.

[14] Simon Poulsen (pers. comm.) mentions the possibility that these words might reflect a borrowing of a derivative of Gr. σῑμός 'snub-nosed, flat-nosed', formally identical to the name Σίμων. If the original meaning was 'water vole', the naming motif could be understood as 'snub-nosed (rat)', the water vole often being treated as a rat in popular taxonomy.

4. A tiny Celtic cow-suckler?

Given that (1) Ved. *godhā-* is synchronically transparent, (2) Latin *būfō* probably has a somewhat surprising meaning and (3) Arm. *kovadiac^{c}* clearly has been (re)formed in the not-too-distant prehistory of the language, we may need additional material if we are to accept the reconstruction *$g^{w}o\underline{u}$-$d^{h}Vh_{1}$- 'cow-suckler; chthonic creature'. If such additional material can be identified, we should be able to strengthen the case for the linguistic reconstruction and, hence, the reconstruction of the belief in cow-suckling chthonic creatures all the way back to Proto-Indo-European.

The additional material might be provided by Celtic. A reflex of a derivative of our potential Proto-Indo-European compound *$g^{w}o\underline{u}$-$d^{h}Vh_{1}$- 'cow-suckler' may be found in Breton and Cornish and, via Gaulish, in Modern Gallo-Romance. The attested forms and the likely reconstruction based on these will be treated below.

4.1. Modern Breton *buzhug* 'earthworms'

Modern Breton *buzhug* coll. 'earthworms', *buzhugenn* sglt. '(an) earthworm' is attested from the Middle Breton period onwards. The earliest attestation appears to be found in the trilingual Breton–French–Latin manuscript dictionary (mid-fifteenth century), traditionally entitled the *Catholicon*. Here it is spelled *buzuguenn* and glossed with French *bugue* and Latin *buga* (Cms. 23v), the French word being a borrowing from Breton and the Latin word being a Latinization of the French word. This entry is repeated verbatim in the first printed edition (1499; Ca. 29) and it is continued with insignificant variation in the later Cb. and Cc. We also find the word in a poetic context in M 309, *da muz entre'n buzuc, gant vn huc an trugar* 'your cage [will be] among the earthworms, with a merciless robe', rhyming *muz buzuc huc antrugar*. In the Late Middle Breton *Nomenclator* (1633; Nom. 50), *buzuguen* translates Latin *lumbricus* and French *ver de terre*. The word is continued in Modern Breton, where *buzhug/buzhugenn* seems to be almost universally used for 'earthworm' in the dialects (ALBB 47) and also widely used for 'lugworm' (Berr 1986: 208–210) in coastal regions.

Breton *buzhug* has not yet received a satisfying etymology (HPB 534; Deshayes 2003: 147). The proposed connection with *brutugenn, burtugenn* 'dung heap' (Ernault 1895–1896: 86–89; Henry 1900: 48) is formally impossible. A connection with ScG *baoiteag* 'angleworm' would be more promising, allowing for a Proto-Celtic proto-form

**boi̯ttV-*. However, *baoiteag* is either a borrowing from Engl. *bait* (Oftedal 1956: 107) or a variant of *boiteag* 'maggot', which in turn is a borrowing from MEngl. *bot, botte* 'maggot' (MacBain 1911: 29, 43). Therefore, a connection to *buzhug* is unlikely.

Based on the attestations, we would usually reconstruct a relatively uncontroversial Proto-Breton collective **byθyg* 'earthworms' with an accompanying singulative **byθyg-enn* 'an earthworm'. The main uncertainty concerns the medial fricative, written <z> in Middle Breton. Middle Breton <z> represents two different phonemes, /ð/ and /θ/, and the only way to figure out which is meant is to look at the reflexes in the Modern Breton dialects (and cognates outside Breton, when available). Corresponding to the <z> in Middle Breton *buzuguenn* we find, broadly speaking, Léonais (abbreviated L) and Trégorrois (T) [z], western Cornouaillais (K) [r], eastern K -*Ø*-, Vannetais (V) [h] and -*Ø*- (ALBB 47; Berr 1986: 208–210). This combination would normally be taken as evidence of the medial consonant being PBret. **θ* (thus HPB 534), as if from PCelt. **tt* or **zd*. However, it should be noted that medial **ð* cannot be completely excluded as the immediate source of the attested dialectal forms. While we would expect medial **ð* to simply be lost in TKV Breton, secondary *-h-* as a hiatus-filler is occasionally found after *-y-* in Vannetais, as in PBrit. **tru̯yeð* (< PCelt. **troṷgiḭā*; cf. OIr. *trógae*) > **try.eð* (cf. MBret. *truez*) > EModV *truhé* [tryˈhẹ] 'pity' (consistently spelled with <h> in Early Modern Vannetais; cf. ALBB 592). Thus the Vannetais and eastern Cornouaillais forms of *buzhug* showing medial [h] (and *-Ø-* secondarily from this) may also be reconciled with a reconstruction **byðyg*. The western K [r] is not in itself the regular development of either **θ* or **ð* but rather due to sporadic rhotacism that may affect either fricative in medial position.[15] Therefore, the attested [r] does not allow us to decide whether the Proto-Breton form contained the voiced or the voiceless fricative. This then leaves us with the T [z]. While it does not constitute the regular development, there are clear cases where **ð* also gives [z] in T, probably specifically next to high vowels, e.g. **buðar* 'deaf' (MBret. *bouzar*) with [z] in almost all of T (ALBB 36). Therefore the attested dialectal forms can, at least in principle, also go back to PBret. **byðyg*.

[15] Jackson (HPB 533–534) notes that rhotacism of **θ* is very rare, being otherwise only found in the reflex of **hṷɪθigell* 'bladder', a derivative of **hṷɪθ-* 'to blow', which shows *-r-* in much of Cornouaille.

Even if we do reconstruct PBret. **byθyg* with a voiceless medial **θ*, there are a number of instances where etymological medial **ð* appears to have been devoiced to **θ* in all of Breton. This is clearly observable in several verbal stems with medial etymological **ð*, such as ModBret. *lazhañ* 'to kill' and *kouezhañ* 'to fall' (cf. W *lladd-*, *cwydd-*), where the Breton dialectal reflexes point to **θ* (whence the modern spelling with <zh>). According to Jackson (HPB 707), these can be explained by recourse to the regular loss of medial **ð* in TKV and the introduction of a secondary *-h-* to eliminate the subsequent hiatus. However, this account is contradicted by the development of *kuzhañ* 'to hide' (PBrit. **kʉð-*; W *cuddio*), where the etymological **ð* surfaces as /z/ in Trégorrois[16] as opposed to the loss in Cornouaillais[17] and the /h/ in Vannetais. The Trégorrois [z] in the reflex of **kyð-* cannot be explained as a hiatus-filler but it makes perfect sense if we operate with a Proto-Breton stage **kyθ-*.[18] Hence the easiest way to account for verbal stems such as *lazhañ, kouezhañ, kuzhañ* may be to assume a sporadic change of medial **ð* > **θ*,[19] and this may therefore also account for the apparent medial **θ* in *buzhug*. It is possible that this change is related to the sporadic development of an unetymological *-h-* next to (or devoicing of) medial nasals and continuants. This is seen in e.g. PBrit. **tɪɰuɪl/*tɪɰoɪl* > MBret. *teffoal, theffhal* 'dark' > ModBret. *teñval*, but T [ˈteβ̥al], [ˈtefal], V *tihoel* [tiˈhweːl] (ALBB 581, NALBB 550), PBrit. **mölinɔdr* > MBret. *melinhezr* > ModBret. *meliner*, but V [məliˈn̥ɛːr], [miliˈn̥eːr] (ALBB 458[20]), PBrit. **punner* > MBret. *ponnher, ponher* 'heavy' > ModBret.

[16] Plougrescant <kuz-> (Le Dû 2012: 337), Perros-Guirec [ˈkyːzət] (Konan 2017: 151), Bégard [ˈkyːzã] (Brezhoneg Bro-Vear; https://www.brezhonegbrovear.bzh/geriadur.php?ger=2514).

[17] Argol [ˈkyət] (Bothorel 1982: 46), Carhaix-Plouguer [cyː] (Timm 1984: 179), Berrien [kyːat] (Ploneis 1983: 38), Saint-Yvi [kyːi] (Heusaff 1996: 194)), south-east Cornouaille [da gyːd] (Bouzec, Goapper & Souffez 2017: 37).

[18] It is furthermore likely that the vowel height plays a part in the outcome of medial **θ* in TK Breton. When preceded by a low or mid vowel, we tend to see **θ* > **h*, **x* (cf. *poazhat* 'to cook' > TK [ˈpwa(x)at], ALBB 529, *razhed* 'rats' > TK [ˈra(x)əd], ALBB 545), when preceded by a high vowel **θ* is much more likely to behave like word-final **-θ* and give /z/ (cf. *lizher* 'letter' > TK [lizer], ALBB 431).

[19] This change cannot be the result of final devoicing of **-ð* > **-θ* (in the 3sg. pres.) carried over to medial position. This is because the contrast between **ð* and **θ* is preserved almost without exception exactly in word-final position.

[20] See Jørgensen (2009) for the reconstruction and development of the suffix in this word.

pounner, but V [poˈn̥eːr] (ALBB 538, NALBB 46[21]), PBrit. **kou̯ann* > MBret. *couhenn* 'an owl' > ModBret. *kaouenn*, but Goello [ˈkowhen], [ˈkowhən], V *kohann* [koˈhãn], [kuˈhãn] (ALBB 359[22]).

So, while **byθyg* might be the most straightforward reconstruction, it is fully possible that **byðyg* would produce the same result.

4.2. Middle French *bugue*

As we saw above, Middle Breton *buzuguenn* is translated by Middle French *bugue*, presumably /bygə/ in the *Catholicon* (see Chauveau 1992: 134–135). This appears to be the only known attestation of *bugue*. However, despite its rarity, it is likely to represent a real word and not just a nonce-borrowing from Breton.[23] This is due to the fact that *bugue* does not exactly match Breton *buzuguenn* or *buzuc*. It must therefore have had its own life in a local variety of French for some time. Furthermore, the Latinization to *buga* in the *Catholicon* provides independent confirmation that *bugue* is spelled correctly and should be read /bygə/.

However, the French gloss *bugue* is more problematic than traditionally assumed.[24] It is usually taken to show **θ* > **h*, which in this particular word is a development specific to Vannetais and a small part of Cornouaille. The oldest examples of the change of **θ* to *h* in Vannetais are from the late fifteenth century, later than the appearance of *bugue* in the *Catholicon*, and the change was only carried through in

[21] The *-h-* is subsequently lost outside Bas-Vannetais and the immediate surroundings, as in the reflexes of MBret. *ann heol* 'the sun' (ALBB 319, NALBB 163).

[22] The distribution of [h] and [Ø] in this word largely corresponds to that found in the reflexes of intervocalic PBret. **h* from PBrit. **h* (< **xs*) and **x* (< **kk*; see Schrijver 1997: 298–300) seen in MBret. *vhel* /yhel/ 'high' < PBrit. **ʉxel* < PCelt. **ou̯xselo-* (ALBB 593; NALBB 17; MW *uchel*, MCorn. *vghel*), MBret. *dehou* /dehou̯/ 'right' < PBrit. **dehou̯* < PCelt. **dexsou̯V-* (ALBB 147; MW *deheu*, MCorn. *dyhow*, *dyghow*) and, with a slightly more limited distribution of *-h-*, MBret. *buhez* /byheð/ 'life' < PBrit. **bʉxeð* (ALBB 33; MW *bucheð*) and MBret. *bihan* /bihan/ 'little' < PBrit. **bɪxan* (NALBB 43; MW *bychan*, MCorn. *byhan, beghan*). We can therefore posit PBret. **kou̯hann* with medial **-h-*.

[23] It is possible that this form survives in Malestroit Gallo *bugue, buguet* (Viaud Grand-Marais 1912: 187) but this could also just be a much more recent independent borrowing from Vannetais, given the proximity to the linguistic border.

[24] The Breton singulative *buzhugenn* has also been borrowed by neighbouring Romance varieties as [bœjẽ], [bøgẽ], [bigẽ] (ALF 1371, ALO 465). FEW (20: 6) takes this to have been borrowed recently from Vannetais after the development of non-initial **θ* > **h* (> **Ø*) in this dialect. This seems reasonable and the late attestations of the Gallo-Romance forms fit the time frame.

the course of the sixteenth century (HPB 683). So, even if the change is put some 50 years earlier (in spite of the lack of evidence for this), we are left with a very narrow window for the "French" borrowing *bugue* (from Vannetais) to become established as a suitable word translating MBret. *buzuguenn* in a dictionary compiled outside the Vannetais area. Therefore, it seems rather more likely that the loss of the medial fricative came about in French after the word was borrowed. This could be regular if we instead reconstruct a medial **ð* for an earlier stage in Breton, as it is suggested above. It then becomes possible to see the French borrowing of *bugue* as having occurred quite a bit earlier, say as EOWFr. **byðygə* (appr. 900–1100 AD) with subsequent regular loss of **ð* in later Old French and contraction of **by.ygə* to the attested *bugue*. To be fair, however, it is not entirely clear how an early borrowing of **byθyg* would turn out in Old French, hence this reconstruction is not necessarily contradicted by the French evidence.[25]

4.3. Middle Cornish *vethygan* 'earthworm'

A cognate of Breton *buzhug* has been known from Late Cornish for a considerable time: the collective *bulug* (Lhuyd *apud* George 2020: 113) and the singulatives *bulligan* (Borlase) and *beligan* (Pryce ms.). The latter forms are continued in the English dialect of Cornwall as *buliggan, buluggan*. However, a form closer to Breton *buzhug, buzhugenn* is probably found in the recently discovered Middle Cornish *Life of Saint Kea*. In a series of verses spoken by different legates praising the

[25] If an Old French /bygə/ 'worm' (← Old Breton **byðyg*) existed locally in Brittany, we may note the striking similarity between this and the English word *bug* 'any small insect or larva'. The resemblance between the two could be more than a coincidence. English *bug* (first attested in 1594 according to the OED) is without a convincing etymology. A connection with *bug* 'an imaginary evil spirit or creature; a bogeyman' may be possible, however "early examples [of *bug* 'insect'] show no clear evidence of such association." (OED s.v. *bug*, n.[2]). If an Old French **bugue* really existed, possibly only locally in Brittany, it is possible that this became part of Anglo-Norman (with its north-western French base) and from there entered Middle English. Admittedly, the phonological match is not perfect. We would probably expect Old French /bygə/ to be borrowed as MEng. ***buge* /biugə/ > ModEng. /bju:g/, rather than the MEng. *bugge* /buggə/ > ModEng. *bug* we actually find. The irregularity consists in the borrowing of OFr. /g/ as Engl. /gg/ (Luick 1964: 447), whereas the substitution of OFr. /y/ with Engl. /u/ would probably follow regularly before the long consonant (Luick 1964: 442–443) as in e.g. OFr. *juge* /dʒydʒə/ > Engl. *judge*. A semantic broadening from 'worm' to a more general 'worm; bug; insect' is unremarkable, as evidenced by e.g. W *pryf* 'insect' < PCelt. **k^{w}rimi-* (ModBret. *preñv*, OIr. *cruim* 'worm') < PIE **k^{w}r̥mi-* (Lith. *kirmìs*, Ved. *kr̥mi-* 'worm').

emperor, we find the following passage spoken by the ninth legate (BK 22.86–22.90[26]):

ethos floran
drys peb in noer
an ***vethygã***
indan an doar
ath worth heb mar

"Thou art a flower
beyond all in the world
the *bethygan/methygan*
under the ground
worships thee, without doubt"

The surrounding stanzas, spoken by the various legates, likewise praise the emperor. The tenth legate states *whath lovan goyth / in y vgog / thys a ynclyn* "Yet a wild weasel / in its burrow / bows down to thee" (BK 22.98–22.100). The twelfth legate, in a difficult and probably garbled passage, states *nygh in dowr / trvth na [s]ylly / nath svl ma thilly / dã ny gã / na pyma brã / nath prys* "swims in water / a trout nor eels / do not […], if thou canst / does not sing / nor where is a crow / that does not praise thee" (BK 23.09–23.14). Even though the precise details of these stanzas may elude us, it seems clear that we are presented with various animals in their natural habitat and a brief description of how even *they* worship the emperor. In this context, George's interpretation of *an vethygan / indan an doar* as 'the earthworm / under the ground' is very appealing and will be followed here. This implies that *vethygan* is from *bethygan**, with regular lenition after the article of a feminine noun.

Unfortunately, neither Middle Cornish *vethygan* nor Late Cornish *bulug/bulligan/beligan* (with sporadic lambdacism) helps much in the reconstruction of the Proto-Brittonic form. Middle Cornish *-th-* is ambiguous as to voicing and the unrounded *-y-* /i/ or /ɪ/ in *vethygan* may have been introduced from the collective, where it was unstressed.

[26] This follows the interpretation of George (2006: 130–131). Thomas & Williams (2007; lines 1765–1769) instead interpret *an vethygan* as the plural of *bothiak* 'hunchback', i.e. 'goblin'. This seems less plausible considering the context. One could also consider reading /øθigan/, a singulative or diminutive derivative of MCorn. *vthyk* /øθig/ 'dreadful, horrible' (cf. MBret. *euzic* 'horrible'), i.e. 'the (little) dreadful one' ('the devil'?).

Therefore, MCorn. *vethygan* may equally well derive from older **bVθig-*, **bVðig-*, **bVθyg-* or **bVðyg-*.

4.4. Proto-Brittonic and Proto-Celtic reconstruction

We have now arrived at two possible Proto-Brittonic reconstructions: **bʉðʉg* and **bʉθʉg* (i.e. Proto-SWBrit. **byðyg* and **byθyg*). What is immediately noticeable is the fact that the word is suspiciously long *not* to be an older compound or a derivative, yet the possible reconstructions do not appear to lend themselves to further analysis. However, a solution may present itself. There is a very strong tendency[27] in Breton and Cornish to spread the rounding of rounded front vowels. Accordingly, Proto-Brittonic reconstructions with combinations such as *iCʉ*, *ʉCi*, *ɪCʉ* and *ʉCɪ* could most likely all produce the observed outcome *ʉCʉ* (i.e. Breton and Cornish *yCy*). We find e.g. MBret. *cusul* /kysyl/, OCorn. *cusul* /kysyl/ 'advice' from PBrit. **kʉsɪl* (← Lat. *cōnsilium*; cf. MW *kussyl*), MBret. pl. *munut* /mynyd/, MCorn. pl. *munys* /myniz/[28] 'little' from PBrit. **mɪnʉd* (← Lat. *minūtu-*). There appear to be no examples specifically with Proto-Brittonic *iCʉ* or *ʉCi* in Middle or Modern Breton and Middle Cornish. However, this is most likely not because rounding did not spread in this context but rather due to a lack of material. With this assimilation in mind, a probable morphological analysis becomes available: **bʉθ-ig* or **bʉð-ig*, i.e. as a derivative formed with the Proto-Brittonic suffix **-ig*. This would fit the semantics well, since **-ig* forms diminutives in Brittonic, something that would not be surprising in a word with the meaning 'earthworm(s)'.

It might be argued that diminutives in **-ig* are expected to create singular/plural nouns, not collective/singulative nouns like MBret. *buzuc/buzuguenn*.[29] This may not be an insurmountable difficulty, however, once we look at the backstory of these systems. It is likely that the innovative collective/singulative system arose as a consequence of the loss of final syllables. This will have led to widespread homophony

[27] This is not an exceptionless change, as seen in e.g. OBret. *budicolma* /byðigøl-μa/ 'victorious place' (Fleuriot 1964: 92) and the personal name EMBret. *Budic, Buzic* /byðig/ (Cq 2, 3, 8) < **bʉðig* 'victorious', with preserved *yCi* < *ʉCi* (cf. W *buddig* 'victorious'). Cf. the situation in Welsh, where *ʉCi* may or may not show assimilation to *ʉCʉ*, e.g. in MW *llurig*, *llurug* 'cuirass' < PBrit. **Lʉrig* < Lat. *lōrīca*.

[28] /y/ is unrounded to /i/ in post-tonic position in the course of Middle Cornish.

[29] Singular/plural nouns form an unmarked singular and a marked plural, while collective/singulative nouns form an unmarked collective and a singulative marked by the suffix *-enn*.

between the inherited singular and plural. In cases where the plural was more frequent, this was used as the underived form from which a singulative was derived by means of the suffix masc. *-*ɪnn*, fem. *-*enn*. Since the derivational base *-*bʉð* most likely did not exist at the time of the loss of final syllables, it is unsurprising that a derivationally opaque *-*bʉðig* (or already *-*bʉðʉg*) 'earthworm; earthworms' would become a collective/singulative noun rather than a singular/plural noun. A similar relegation of a derivative in *-*īko*- to the collective/singulative system is seen in MBret. *briniq*, ModBret. *brennig(-enn)*, ModW *brennig(-en)* 'limpets' < PBrit. *-*bẹŗẹnn-ig* 'barnacles', which corresponds to OIr. *bairnech*, presumably from PCelt. *-*barann-īko*- (cf. Jørgensen 2024: 140–142). Likewise in EModBret. coll. *minuic*, MBret. sglt. *minuiguenn* 'crumb' < PBrit. *-*mẹnu̯ig* < PCelt. *-*menu̯-īko*- or *-*manu̯-īko*-, derived from the adjective found in OIr. *min* 'minute, small', W *mân* 'small, little' < PCelt. *-*menu-*/*manu*- < PIE *-*men-u-*/*mn̥-u̯-V*-.[30] These demonstrate that, once the derivational base was no longer present, original diminutives in *-*īko*- could end up in the collective/singulative system rather than the singular/plural system if semantically suitable. Therefore, an analysis of *buzhug*, *vethygan* as being an original diminutive in *-*ig* seems likely.

4.5. Gascon *bousic*, *boudic*, Saintongeais *bouic*, *bouit* 'earthworm'

As we have seen above, Breton *buzhug(-enn)* and Cornish *vethygan* 'earthworm(s)' may be plausibly derived from a PBrit. *-*bʉθig* or *-*bʉðig*. Evidence from Gallo-Romance may tip the scales in favour of the latter reconstruction, with medial *-ð-. In Gascon and Saintongeais, south-western varieties of Gallo-Romance, we find a strikingly similar word with the exact same meaning: Gascon *bousic* [buˈzik], *boudic* [buˈðik], Saintongeais *boui* [bwi], *bouic* [bwik], *bouit* [bwit][31] 'earthworm' (ALF 1371, ALO 465, 466, ALG 65). No etymology is known for this word (FEW 21: 279). Coromines, probably correctly, connects it to Occ. *bousigo* 'fallow land' but does not provide any further details on the semantic development (DECLC II: 46; cf. § 4.6 below). Based on the attested forms, we are able to reconstruct a Proto-Gallo-Romance

[30] Cf. W *difenwi, difanw*- 'to belittle, to diminish'.

[31] Unetymological *-t* in the singular of masculine nouns is typical in this area, as in e.g. [aˈbriːt] 'shelter' (ALF 4), Fr. *abri*, derived from Lat. *aprīcāre*; [aˈmiːt] 'friend' (ALF 38), Fr. *ami* < Lat. *amīcus* (cf. Morin 1986: 179–181).

**bọˈðikọ-*. This would, if inherited, reflect a Latin **bOdīcu-*.[32] However, in the absence of a suitable Latin etymon, we may assume that Gallo-Romance **bọˈðikọ-* 'earthworm' was borrowed from a local language predating the spread of Latin, the most likely candidates being Gaulish and Basque/Aquitanian. In the absence of a suitable Basque candidate and since the word is attested as far north as Saintongeais, a Basque origin appears unlikely, whereas a Gaulish origin would come as no surprise. If the connection with the words for 'fallow land' (Section 4.6) is accepted, then the geographical spread would be much wider and make a Basque origin even less likely.

The Proto-Gallo-Romance reconstruction **bọˈðikọ-* already gets us quite close to one of the proposed Proto-Brittonic reconstructions based on Breton *buzhug*, MCorn. *vethygan*, namely **bʉðig*. Both GRom. **bọˈðikọ-* and PBrit. **bʉðig* can be united in a Proto-Celtic reconstruction **bou̯dīko-*, with GRom. **bọˈðikọ-* having been borrowed from a Gaulish intermediary. Admittedly, the Gaulish reflex of Proto-Celtic **ou̯C* in Latin borrowings is usually identified with Latin *-au-* or *-ū-*. However, there are instances where the Gaulish reflex of PCelt. **ou̯C* is substituted with Latin *-ō-/-ŭ-* (VLat. /ọ/), as in **bou̯-tegos* 'cowshed' > GRom. **bọte-* > e.g. Valais (Franco-Provençal) [bọu] (von Wartburg 1927; FEW 1: 463; cf. MW *beudy* 'cowshed' < **bou̯o-tegos*), and a development from **ou̯* to **ū* in Gaulish would likely go via **ō* anyway. There is also onomastic evidence from Gaulish of the stage *-ō-* (Ellis Evans 1967: 396). Therefore, if MBret. *buzuguenn*, MCorn. *vethygan* and PGRom. **bọˈðikọ-* 'worm' are etymologically connected, the most likely reconstruction would be a PCelt. **bou̯dīko-*.

4.6. Occitan *bousigo*, Cat. *boïga* 'fallow land'

We have now arrived at a plausible reconstruction **bou̯dīko-* '(earth)worm' for Proto-Celtic, with reflexes in Brittonic and Gaulish (reflected indirectly in Gallo-Romance). It is possible that the proposed reconstruction may provide the key to a long-standing etymological riddle in Gallo-Romance, namely the origin of Fr. (dial.) *bouige*, Occ. *bousigo*, *bouigo*, Cat. *boïga* 'fallow (land)', i.e. land which is either uncultivated or intentionally left without sowing and instead treated in

[32] The cover symbol *O* represents a vowel that may derive from Lat. *ŭ*, *ŏ* or *ō* (VLat. **ọ* or **ɔ*). The contrast between these phonemes is neutralized in pretonic position.

various ways to make it fertile again.[33] This word is widely attested in southern French, in Occitan[34] and in northern Catalan[35] (cf. FEW 1: 424; ALF 1600; ALO 75; ALDC 744, 774). The attestations point to a Gallo-Romance proto-form **bo̯ˈðika*, a reconstruction very similar to our word for '(earth)worm', GRom. **bo̯ˈðiko̯-*. And, like it, GRom. **bo̯ˈðika* has yet to receive a completely convincing etymology. A Gaulish origin has long been suspected on account of the geographical distribution, the semantic field and what could be the Gaulish suffix **-īkā* (Grzega 2001: 90). Among the more prominent previous etymological proposals one can mention the following:

1. From Gaul. **bo̯udīkā* (DECLC II: 45), with cognates in OIr. *búadach* 'victorious, triumphant', MW *buddig* 'id.'), a derivative of the noun **bo̯udi-* (OIr. *búaid* 'victory, triumph', MW *budd* 'profit, gain'). The semantic justification would be that fallow land is land that is made profitable, though such a semantic connection is not found in Insular Celtic.

2. From Gaul. **bodīkā*, a derivative in **-īkā* from the PIE root **b^{h}ed^{h}(H)-* 'to dig' (Lejeune 1954–1955: 284). The root is indeed attested in Celtic (PCelt. **bedo-* > W *bedd* 'grave', Bret. *bez* 'id.', Gaul. **bedo-* in OFr. *biez*, ModFr. *bief* 'a reach of water') and the semantic motivation would be an eminently reasonable '(land) which is dug'. However, neither the precise formation nor the ablaut grade is known from Celtic.

3. From Gaul. **budīkā* 'burnt land' (Gamillscheg 1921: 505) a derivative from an alleged Proto-Celtic root **būd-* 'to burn' (better **bo̯ud-*), connected by Gamillscheg to Fr. *écobuer* 'to fertilize the soil by burning clods and roots covered by earth and spreading it'. However, the evidence for a Celtic root **bo̯ud-* is close to non-existent and Fr. *écobuer* is most likely completely unrelated.[36]

Since none of the etymologies proposed for **bo̯ˈðika* (cf. FEW 1: 424; see Grzega 2001: 89–90 for a recent discussion) is immediately convincing, it may be worthwhile revisiting the issue. Very often, words for 'fallow (land)' are derived from verbs with the meaning 'to break

[33] There are various ways of preparing land for growing crops and ensuring that the soil is fertile, e.g. letting it grow over, breaking it open and turning the soil, covering it with manure or with burnt twigs and clods.

[34] Rarely also as a masculine [ˈbuzik] (ALF 1600, pt. 782, 783).

[35] Also as a masculine *boïc*.

[36] Spitzer (1922: 20) instead derives *écobuer* from OFr. *cobe* 'hit, blow' < Lat. *colaphus*.

open (and turn the soil)'. This is observable in e.g. Fr. *rotis* (< Lat. transp. **ruptātīciu-*, derived from *ruptu-* 'broken'; FEW 10: 569[37]), Occ. *frachivo* (< Lat. transp. **fractīva*, derived from Lat. *fractu-* 'broken'), OHG *brâcha*, ModG *Brache* (< PGerm. **brēkō-*, derived from **brekan-* 'to break', EWA 272–273). With this in mind we may take a closer look at the Occitan verb *bousiga* (< GRom. **bọði̯kare* < transp. Lat. **bOdīcāre*), glossed as 'fouger, fouiller, vermiller; en parlant des pourceaux', i.e. 'to grub, to rummage (about pigs)' (Mistral 1979: 1.346). The Occitan verb *bousiga* is clearly related in some way to *bousigo* 'fallow (land)' and probably further to our *bousic* '(earth) worm' as well. The semantic and derivational relationship between these words becomes understandable when confronted with the French verb *vermiller* 'to grub, to rummage, to dig (of pigs searching for worms and roots)' which translates *bousiga*. Fr. *vermiller* goes back to Old French *vermeillier* and ultimately to **vermiculāre* 'to search for worms', a verbal derivative of the Latin noun *vermiculus* 'little worm, grub'. In a completely parallel fashion, *bousiga* 'to grub, to rummage, to dig (of pigs searching for worms)' may be derived regularly from *bousic* 'earthworm, worm':

Lat. *vermiculus* 'worm'

→ **vermiculāre* > ModFr. *vermiller* '(of a pig) to grub, to rummage, to dig'

GRom. **bọ|ðikọ-* '(earth)worm'

→ **bọðikare* > ModOcc. *bousiga* '(of a pig) to grub, to rummage, to dig'

This would entail that the noun *bousigo* 'fallow (land)' originally meant 'land which is dug up (by rummaging pigs)'[38] and that it was

[37] Cf. also Fr. *rompre* 'to break', also 'to plough land for the first time after a long resting period' (FEW 10: 568), Cat. *rompre* 'to break', also 'to clear land for agricultural work' (ALDC map 744, pt. 45), Sindhi *paṭaṇu* 'to dig up, to pluck out', Punjabi *paṭṭṇā* 'to dig up, to open' alongside Nepali *paṭnu* 'to lie fallow', from Skt. *paṭ-* 'to split' (Turner 1966: item 7711).

[38] The use of pigs for breaking, turning and clearing the soil and preparing land for growing crops was probably common in prehistoric Europe. However, it is difficult to find positive evidence owing to the absence of archaeological remains (see Harding 2000: 125). That the natural rummaging behaviour of pigs was used for preparing land might be indicated by various etymological connections between words for 'pig' or '(pig's) snout' and words for 'ploughshare' or similar words relating to land cultivation, as in Celt. **sukko-* (MBret. *houch* 'pig', MW *hwch* 'pig;

back-formed from the verb *bousiga* 'to grub, to rummage, to dig'.[39] Such a back-formation from verb to noun appears to have taken place once more at a later stage, as evidenced by the Middle French (Poitevin) variant *bouge* 'terrain en friche'. This appears to reflect an input form *ˈ*bọ̈ðVka* (thus FEW 1: 424), that is, as if from CLat. **bŭdĭca* or **bōdĭca*. However, *bouge* could simply be back-formed from a verb **bouger* (= Occ. *bousiga*), the regular outcome of **bọ̈ðiˈkare* with pretonic syncope (cf. e.g. Poit. *niger* 'to nest' < Lat. **nīdicāre*; FEW 7: 115).

Accordingly, we may posit, on the synchronic level, a derivational chain starting with a noun *bousic* 'worm', going via a verb *bousiga* 'to grub, to rummage, to dig' (< 'to look for worms') and ending with *bousigo* 'fallow (land)' (< 'land to be rummaged'). A close parallel for this process may be provided by southern French *fòuge* 'uncultivated land that produces a lot of grass; clearable land' (Varennes-sur-Allier, Bourbonnais; Mistral 1979: 1.1155; FEW 22/2: 24), which in all likelihood is back-formed from the verb *fouger* 'to grub, to rummage, to dig (of pigs)' < Lat. **filicāre* 'to grub, to rummage, to dig (of pigs searching for fern roots)',[40] itself a verbal derivative of the Latin noun *filix* 'fern'

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sow', Ir. *soc* 'snout; ploughshare'; Fr. *soc* 'ploughshare' ← Gaulish). This use may go back to Proto-Indo-European times, provided that the connection between **porḱo-* 'pig' (OIr. *orc*, OEng. *fearh*, Lat. *porcus*, Lith. *paršas*) and **pr̥ḱ-* 'furrow' (OEng. *furh* 'furrow', Lat. *porca* 'the ridge between two furrows') is correct (possible verbal root PIE **perḱ-* 'to dig, to tear open'(?) in Lith. *peršti* 'to hurt; to sting, to burn (of a wound)'; see Specht 1944b: 34–35; LIV 475; IEW 821). It might also explain the Proto-Indo-European root noun **suH-* 'pig' (reflected in e.g. YAv. *hū-*, Gr. ὗς, Lat. *sūs*, Alb. *thi*), traditionally derived from verbal root **seu̯H-* 'to give birth to, to bear' (IEW 1039; EIEC 425; NIL 683–686). This might instead be derived from **seu̯h₁-* 'to push, to shove'(?) (Hitt. *suwezzi* 'pushes', Ved. *suváti* 'impels', OIr. *soïd* 'turns'; LIV 538–539), i.e. originally meaning 'one who pushes, turns (the soil)'. For a semantic parallel, see MModFr. *bouter* 'to push, to hit', secondarily 'to rummage, to grub (about boars)', *boutoir* 'snout of a boar', *boutis* 'place where a boar digs with its snout looking for roots' (FEW 15/1: 215). Naturally, it is also possible that examples such as these do not attest to the actual use of pigs for preparing land for agricultural use but rather are simply descriptive of the observable behaviour of wild and/or domesticated pigs.

[39] Much like e.g. Lat. *aprīcāre* > Occ. *abriga* 'to cover' → *abrigo* 'a cover', Lat. **carricāre* > Occ. *carga* 'to load' → *cargo* 'a load, burden', Lat. *substāre* > Occ. *sousta* 'to stand under' → *sousto* 'shelter from the rain' (cf. MFr. *soutte*).

[40] Cf. ModBret. (Ouessant) [diˈgran-a] *digrannañ* 'to remove fern bulbils; to clear land for agriculture' ← [krãn], [kran-] *krann* 'fern bulbils' (Madeg 2023: 125, 213); OEng. *wrōtan*, Du. *wroete*, Dan. *vråde* 'to dig with the snout, to rummage' < PGerm. **u̯rōtan-*, ModGerm. *Rüssel* 'pig's snout' < **u̯rōtila-* (instr. noun), probably derived from PIE **u̯reh₂d-* 'root' (cf. Lat. *rādīx*, Goth. *waurts*).

(cf. TLFi s.v. *fouger*). This provides a parallel of the entire semantic and derivational chain:

Lat. noun *filix*, *-cis* 'fern'

→ vb. **filicāre* 'to search for fern roots' > Fr. *fouger* 'to grub, to rummage (of a pig)'

→ Fr. noun (dial.) *fòuge* 'uncultivated land that produces a lot of grass; clearable land'.

GRom. noun **bọˈðikọ-* '(earth)worm'

→ vb. **bọðiˈkare* 'to search for worms' > Occ. *bousiga* 'to grub, to rummage (of a pig)'

→ noun **bọˈðika* 'rummaged area' > Occ. noun *bousigo* 'fallow (land)'.

It should however be admitted that an alternative account of the relationship between *bousic* 'earthworm' and *bousiga* 'to grub, to rummage' is possible. The English noun *grub*, MEngl. *grobbe, grubbe* 'larva of an insect' is presumably derived from the verb *to grub*, MEngl. *grobbe, grubbe* 'to break up the surface of (the ground); to clear (ground) of roots and stumps' < **grubjan-* (cf. OED s.v. *grub* n.) and may accordingly provide a parallel for the derivational direction 'to break the surface of the ground' → 'worm', i.e. the opposite direction of Lat. *vermiculus* → **vermiculāre* (Fr. *vermiller*). If this derivational direction is assumed for *bousiga* and *bousic*, the connection with the Brittonic words for 'earthworm' would most likely have to be abandoned.

5. A Proto-Indo-European **g^{w}ou̯-d^{h}h$_1$-iko-* 'little cow-suckler'?

With GRom. **bọˈðika* 'fallow (land)' having been explained as a derivative of GRom. **bọðiˈkare* 'to look for worms', itself a derivative of **bọˈðikọ-* 'earthworm', we may now return to the core of this chapter, the etymology of the word for '(earth)worm'. Based on Breton *buzhugenn*, MCorn. *vethygan* and Gasc. *bousic, boudic* we have arrived at a Proto-Celtic reconstruction **bou̯dīko-* '(earth)worm'. This PCelt. **bou̯dīko-* may be analysed as a derivative of a hypothetical **bou̯dV-* by means of the suffix **-īko-*. The suffix **-īko-* mostly forms adjectival derivatives and, observable especially in Brittonic, diminutive

nouns. The etymological background of the suffix *-*īko*- has been discussed by Russell (1990: 72–76), who argues that PCelt. *-*īko*- ultimately reflects an older *-*ĭko*- with secondary lengthening of the vowel. It would then continue the arguably Proto-Indo-European diminutive and adjectival suffix *-*iko*-.[41] This means that we may tentatively project PCelt. **boud̯-īko*- back to an even earlier **boud̯-iko*- with a short -*ĭ*-. If this reconstruction is considered valid, we may note that this Pre-Proto-Celtic diminutive **boud̯-iko*- '(earth)worm' provides a perfect formal match (apart from the gender) with Skt. *godhikā* 'gecko' and, with regard to the meaning, with Kal. *góhik* 'worm' reflecting a Proto-Indo-Iranian diminutive **gaud̯^{h}(H)-ikaH*- (see Section 2.1[42]). Hence it is formally possible to reconstruct a PIE **g^{w}oud̯-d^{h}h$_1$-iko*- 'little cow-suckler; little chthonic creature; worm, bug' on the basis of Celtic and Indic material. However, it might be more likely that we are dealing with independent derivatives based on shared inherited material, given that the reconstruction is based solely on two branches and that the reflex of the suffix *-*iko*- remains productive in both branches. Nevertheless, it is possible that Celtic provides an additional piece of evidence for the belief in milk-suckling, chthonic creatures among the early Indo-Europeans.

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[41] For this suffix, see e.g. Wackernagel & Debrunner 1954: 313: "Es scheint im Ig. ein populär-deminutives *-*iqo*- […] gegeben zu haben".

[42] The other Dardic and Nuristani words, Khow. *goγ*, Askun *gǭk* 'worm; bug', etc. appear to reflect the form of *godhā́*- with the meaning of *godhikā*.

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8. The Baltic house snakes in an Indo-European context

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Abstract

This chapter deals with the phenomenon of milk-drinking snakes in Lithuanian and Latvian folklore and ritual practices. While this motif was predominantly documented during the nineteenth and twentieth centuries, older chronicles provide evidence of the significance of snakes in early Baltic religious practices. This study aims to explore the origins of the Baltic house snakes and shed light on the ritual and folkloristic practices that involve milk and snakes within the Baltic tradition.

1. Background

Traditional folklore from Lithuania and Latvia contains numerous tales about grass snakes (Lith. *žaltys* / Latv. *zalktis*) that are kept on farms and often fed with milk. While much of this material was recorded relatively late, primarily during the 19th and 20th centuries, earlier historical accounts of pre-Christian Baltic religious practices, as documented in medieval chronicles, underscore the cultural significance of snakes and reveal the continuity of these customs over time.

2. House snakes in Baltic folklore

The evidence from folklore has been collected and analyzed by Yvonne Luven in her doctoral thesis (2001). In these folk tales, the entities referred to as "house snakes" are primarily connected to themes of milk, rainfall, fertility and the well-being of children. These house snakes typically dwell in barns or in houses, often near the fireplace.

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They are generally associated with good luck, prosperity and fertility and encountering a grass snake is mostly considered fortunate.[1]

2.1. Snakes, cattle and milk

In the wider context of this book, it is particularly noteworthy that there seems to be a close connection between the snakes and the cattle. What is more, the snakes seem to be almost exclusively interested in milk as their nourishment and there are stories of snakes stealing milk and also suckling on cattle, such as cows or even pigs. At least up until the twentieth century, there was a prevailing custom among Lithuanian farmers to put out a bowl of milk for the house snake, in order to ensure the well-being of the farm and the cattle. There are also several stories from Latvia with similar themes, cf. Luven (2001: 408ff.). Sometimes, it is described how each cow has its own designated snake, which belongs exclusively to that cow. Such a house snake must never be killed, as this could lead to dire consequences, such as the death of a child or a cow. The following examples illustrate this connection:

> *Žalčius tvartuose laiko, kad karvių pienas nenutruktų.*[2]
>
> Grass snakes are kept in the barns so that the milk from the cows does not stop flowing.
>
> *Seniaus žmonės savo pirkiose laikydavo žalčius. Juos turėdavo gaspadorius penėt. Jeigu žmogus jį išvarydavo arba užmušdavo, jam ir gyvius kad puldavo.*[3]
>
> Earlier, people kept grass snakes. They had to be fed by the master of the house. If the people drove it away or killed it, it would kill one of the animals on the farm.
>
> *Matai seniau kiekvienas gyvulis kaip ir patronų turėjo žaltį ir jam išdvesus ar ažmušus tas gyvulis irgi tures išdvėst.*[4]
>
> In the past, every animal had a grass snake as its patron and if the snake died or was killed, the animal would also have to die.

[1] The snake's role as a symbolic element in ancient Lithuanian folk art, as explored by Gimbutas (1958) is also well-documented.
[2] Passage quoted from Luven 2001: 129.
[3] Passage quoted from Luven 2001: 127.
[4] Passage quoted from Luven 2001: 129.

Kiekviena karvė turi savo žaltį ir, žalčiui nuklydus, mažiau beduoda pieno; perkant karvę, perkamas ir žaltys.[5]

Every cow has its own grass snake and if the grass snake strays away, the cow gives less milk; when buying a cow, the snake must be bought as well.

2.2. Snakes and children

In addition to having a special bond to the cattle on the farm, the snakes are also considered to be especially close with the children of the household. The snakes may also engage in playful interactions with the children, but they usually do not harm them, even if the children misbehave and accidentally harm the snake. For example, there is a common theme in the folktales where someone hides the snake's eggs and, as a punishment, the snake poisons the milk. As soon as the eggs are found again, the snake turns over the poisoned milk bowl, so no one gets harmed (Luven 2001: 441ff.). There are also several folktales where the grass snakes are drinking milk from the same bowl as the children and even when the children hit them on the forehead with a spoon, the snakes withdraw without harming them (2001: 430ff.).[6]

Žalčių kitą kartą buvę daugybė: visose trobose pilni papečkiai! Budavo, sako, įpils vaikams į bliudelį pieno, ant aslos padės ir, kaip bežiurint, šliuožia iš papečkio žaltys prie to pieno lakti. Vaiks su šaukštu per kaktą žalčiui kaukšt suduos, tas ir vėl ein į papečkį čipdamas. Didesniuosius žalčius pintinaitėse laikydavę.[7]

There used to be many grass snakes – every house had its stove recess full of them! It used to be, they say, that someone would pour milk into a small bowl for the children, place it on the floor, and before one could even blink, a grass snake would slither out from the stove recess to lap up the milk. The child would give it a *thwack* on the forehead with a spoon – *kaukšt!* – and the snake would retreat back into the stove recess, squeaking as it went. The larger grass snakes were kept in small wicker baskets.

Kur žalčiai yra, tai ten tie namai yra česlyvi. Žaltys šventas ir jis su vaikais iš vieno bliūdo valgydavo.[8]

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[5] Passage quoted from Luven 2001: 129.

[6] Note that there are many tales about children and snakes eating from the same bowl circulating in Europe, cf. the Aarne–Thompson–Uther Index ATU 285 *The Child and the Snake*. For further discussion and references, see Luven 2001: 123ff.

[7] Passage quoted from Luven 2001: 125.

[8] Passage quoted from Luven 2001: 131.

Where there are grass snakes, those homes are prosperous. The grass snake is sacred and it used to eat with the children from the same bowl.

2.3. The grass snake as a household deity

According to Luven (2001: 138), there are a few characteristics that speak for an interpretation of the grass snake as a household deity, in particular designations like Lith. *namų sargotojas* 'the guardian of the house', the fact that the snake uses the fireplace as a place of residence and the close ties to the *pater familias*.

Žaltys – geras namų saugotojas, kuris sergsti namus nuo perkūno, ligos ir žmogžudystės.[9]

The grass snake is a good guardian of the house, protecting it from thunder, illness and murder.

Latviešu dzīvojamā mājā dzīvojis viena čūska, ko sauc par saimnieci.[10]

In a Latvian household, there lived a grass snake that was called the mistress.

Kai kurie žmonės laiko žalčius namie (trobos kertėje) ir sako: "Jei aš to žalčio netekčiau, tai nebegyvenčiau."[11]

Some people keep grass snakes at home (in a corner of the hut) and say: "If I lost that snake, I would no longer live."

Žalčius seniau žmonės garbino kaip dievus: trobose laikydavo ir pienu girdydavo.[12]

In the past, people worshipped grass snakes like gods: they were kept in huts and fed with milk.

3. Earliest documentation

The extensive research conducted by Luven (2001) highlights the abundance of folklore about house snakes. But can these ideas and customs

[9] Passage quoted from Luven 2001: 131.
[10] Passage quoted from Luven 2001: 134.
[11] Passage quoted from Luven 2001: 131.
[12] Passage quoted from Luven 2001: 131.

be traced further back in time? Below, I will examine the information available from the earliest textual sources.

The earliest detailed records of the Baltic peoples and their religious practices date back to the thirteenth and fourteenth centuries, a time when these pre-Christian communities still adhered to their traditional folk religion. By the fifteenth and sixteenth centuries, the upper echelons of society had converted to Christianity and accounts from this period are often coloured by the biases and disapproval of pagan customs they describe.

The Balts themselves did not begin documenting their old customs and religion until the sixteenth and seventeenth century, during the Reformation and Counter-Reformation. In fact, the very first printed book in Lithuanian, the 1547 Catechism by the Protestant M.M. provides an instructive example of this. In the Latin preface to this catechism, Mažvydas lists several pagan customs that he believed should be abandoned, including the worship of snakes.

> Imo quod auditu horribilius est, multi etiamnum manifestam idolatriam et exercent et profitentur palam: alii arbores, alii flumina, alii serpentes, alii aliud colunt, honorem exhibentes divinum.
>
> Indeed, it is horrible to hear that many even now both practise and openly profess manifest idolatry. Some worship trees, some rivers, some snakes and others other things, offering them divine honour.[13]

The reliability of early records documenting Baltic religious customs is admittedly a matter of concern. Therefore, it is essential to approach the information found in these written records from a critical perspective. In recent publications, for example Puhvel 1974, Mikhailov 1998, Vėlius 1996, 2001, 2003; Ališauskas & Vildžiūnas 2009, Ališauskas 2016 and Young 2022, a major part of the earliest sources has been carefully reviewed and put into its historical context, so we are now better prepared to treat this material appropriately.

Notably, the efforts of scholars like Norbertas Vėlius and Vytautas Ališauskas in collecting, analysing and translating medieval and early modern sources on Baltic religion into Lithuanian represent a remarkable achievement, as does the recent publication of the first English

[13] Text quoted and translated by Young 2022: 82–83.

translations of important Latin texts dating from 1450 to 1580 by Francis Young.

One of the earliest documented descriptions of the practice of keeping house snakes is attributed to the missionary John-Jerome of Prague (1379–1416), as recorded by Enea Silvio Piccolomini (the later Pope Pius II). Piccolomini documented this account in his work *Cosmographia pii papae* in 1458 and his encounter with the former missionary to Lithuania is presenteded as a form of autobiographical personal reminiscence. Young (2022: 2,27) underscores that Piccolomini brought a distinctive viewpoint to the examination of Baltic religion by providing an eyewitness narrative of missionary endeavours in Lithuania. In his account, it is noted that the Lithuanians kept snakes in their homes as objects of veneration.

> **Narratio de Lituanis per Hieronymum Pragensis heremitam. Serpentes colebant. Ignem alii colebant.**
>
> Primi quos adii ex Lituanis serpenteis colebant. Paterfamilias suum quisque in angulo domus serpentem habuit: cui cibum dedit: ac sacrificium fecit in foeni iacenti. Hos Hieronymus iussit omnes interfici. Et in foro adductos publice cremari. Inter quos unus inventus maior caeteris: quae saepe admotus ignis consumere nullo pacto valuit. Post hos gentem reperit: qui sacrum colebat ignem. Eumque perpetuum appellabat.
>
> **Narrative about the Lithuanians by the hermit Jerome of Prague. They worshipped serpents. Others worshipped fire.**
>
> First of all, the Lithuanians to whom I went used to worship snakes. Their head of the household had a snake in a certain corner of the house, to whom he gave food, and made sacrifices to it lying in the straw. Jerome ordered them all to be killed and, having been brought into the marketplaces, to be publicly burnt. One among them was found to be larger than the others, and having been frequently moved would not be consumed by the fire by any means. After these things he found a people who worshipped a sacred fire, and they called it perpetual.[14]

In the later chronicle by the Polish historian Jan Długosz (*Historiae Polonicae*, 1455–1480) we find further descriptions of the pre-Christian customs involving snakes as household deities. Despite remaining

[14] Text quoted and translated by Young 2022: 39–40.

unpublished until the early eighteenth century, Długosz's chronicles wielded considerable influence. His narrative was so compelling that later historians, including Maciej z Miechowa, Alessandro Guagnini and Jan Łasicki, replicated substantial portions almost verbatim.

While Długosz's motivations were more nationalistic and ecclesiastical, aiming to glorify Poland's role in Christianizing Lithuania, his descriptions of pagan practices share thematic similarities with Piccolomini's.[15] In his chronicle, Długosz provides vivid descriptions of the destruction of pagan practices in Vilnius in the year 1387. Here he mentions the existence of special deities in the form of snakes, likening them to household deities, *penates Dii*, that were found in individual homes.

> Reluctantibus barbaris, et se suaque numina (erant autem haec praecipua, Ignis quem credebant perpetuum, qui per sacerdotes, subiectis lignis, nocte atque interdiu adolebatur; silvae, quas putabant sacrosanctas, et aspides serpentesque, in quibus Deos habitare et latere credebant) impium et temerarium contra maiorum instituta deserere et pessundare asserentibus; Wladislaus Rex ignem, qui perpetuus ab illis putabatur, in Vilnensi civitate, quae caput et metropolis gentis erat, sernatum, et a sacerdote eorum, qui Zincz appellabatur, et qui supplicantibus, ac de futuro rerum eventu Numen consulentibus, falsa edebant (quasi haec a Numine accepisset) responsa, custoditum, et sedula lignorum adiectione nutritum, barbaris inspectantibus, extingui, et templum aramque, in quibus hostiarum fiebat immolatio, disrumpi, silvas insuper quae sacrosanctae putabantur, succidi, et lucos eorum confringi, aspides etiam et serpentes, quae et qui in singulis domibus veluti penates Dii reperiebantur, interfici et necari.
>
> The barbarians were reluctant, asserting it was impious to desert and do away with their gods, and presumptuous against those things instituted by their ancestors. Foremost among these were the fire they believed to be perpetual (by the priests putting on timbers), which was worshipped night and day; the forests which they thought sacred; and the snakes and serpents in which they believed the gods lived and lay hidden. With the barbarians looking on, King Władysław arranged for the fire to be extinguished which was lit in the city of Vilnius (which was the chief and capital city of the people), and thought by them to be perpetual. They devoured false responses from their priest (as if he had received them from a god) who kept it and fed it

[15] Cf. Young (2022: 29) for an insightful discussion of the reliability of Długosz's accounts: "The broad consistency between Długosz's account and Piccolomini's has already been noted, and while no living person may have remembered the events of 1387 by 1455 (when Długosz began his chronicle), the final conversion of Samogitia had occurred less than forty years earlier."

> by diligently throwing on timbers, who was called *žinis*, consulting the god about the course of future events. And he arranged for the temples and altars, in which there had been sacrifice of victims, to be broken; and, furthermore, for the forests which they thought sacred to be cut down, and their groves to be destroyed; and for the snakes and serpents (which were found in individual houses like domestic spirits) to be slaughtered and killed.[16]

Długosz goes on to compare the pagan deities to their Roman counterparts and an intriguing connection to Aesculapius[17] is made.

> In aspidibus vero et serpentibus, Deum Aesculapium in forma anguis […] Eisdem sacris, diisque, et cerimoniis, quibus et Romani in errore gentili usi; Vulcanum in igne, Iovem in fulmine, Dianam in sylvis, Aesculapium in viperis et serpentibus colunt; in civitatibus principalioribus tenendo ignem, quem vocabant et putabant aeternum, a Sacerdote custoditum, qui etiam a Daemone instructus, sacrificantibus et petentibus, ambigua dabat responsa. Iovem autem in fulmine venerando, vulgari suo illum Perkunum, quasi percussorum appellabant. Silvas etiam plerasque non secus quam sacrosanctas colebant, quas et intrare, et per detruncationem aut arboris aut frondis violare, capitale fuit. Detruncator enim frondium, aut silvae ingressor, aut iugulabatur a Daemone, aut in aliqua mutilabatur corporis parte. Viperas insuper et serpentes, fere singulorum hominum continebant domus, quibus et nutrimenta praebebant in lacte, et gallos illis velut hostias placationis immolabant.
>
> They also placate snakes and serpents – the god Aesculapius in serpent form […][18]
> They used the same rites, gods, and ceremonies which the Romans used in their pagan error. They worship Vulcan in fire, Jove in thunder, Diana in the woods, and Aesculapius in snakes and serpents. In their principal towns they used to retain a fire, which they called (and considered to be) eternal, guarded by a priest who, instructed by a demon, gave ambivalent responses to suppliants and those offering sacrifice. They venerated Jove in thunder, calling him vulgarly Perkūnas, as if an assassin. And they worshipped many forests as if they are nothing less than sacred; and to enter them, and violate

[16] Text quoted and translated by Young (2022: 44–45).

[17] Greimas (1992: 104) has explored the potential comparisons between Długosz's depiction of Aesculapius and the Old Prussian deity Patrimps, as described in later sources like Simon Grunau. Through this comparison, Greimas attempts to situates Długosz's accounts of early Baltic deities within a broader Indo-European framework of divine functions.

[18] Text quoted and translated by Young 2022: 48–49.

> them by cutting down trees and leaves, was a capital offence. The one who cut down trees, or entered forests, either had their throat slit by a demon, or was mutilated in some other part of the body. Furthermore, the houses of individual men generally used to contain snakes and serpents, to whom they offered milk as nourishment; and they used to sacrifice chickens as placatory victims.[19]

While Jan Długosz proposed that the Lithuanians were descendants of Romans, the Italian writer and diplomat Filippo Buonaccorsi presented an alternative theory in his *Vita et mores Sbignei cardinalis* (1480). He linked the Lithuanians to the Bosphorus region. Buonaccorsi also mentions the peculiar practice of snake worship in this context:

> Accedit ad haec, quod ab initio nullum praecipuum numen habuere, sed Bosporanorum ritu, quidquid colere coepissent, pro deo ducebant; hinc est quod lucos, lapides, solitudines, lacus et diversa animalia coluisse comperimus, sed ante omnia serpentem, quem Gyvotem lingua sua dicunt.
>
> The fact that from the beginning they had no principal spirit, but whatever they began to worship they took for a god (according to the Bosphoran rite), agrees with this. That is, we find that they worshipped groves, stones, deserted places, lakes, and different animals – but before all others they worshipped snakes, which in their language they call Gyvatės.[20]

Maciej z Miechowa, author of *Tractatus de duabus Sarmatiis* (1517), also followed the tradition of Jan Długosz and commented on the practice of the Lithuanians keeping snakes in the houses:

> Silvas autem et lucos sacrosanctos et habitacula deorum putabant. Aspides vero atque serpentes in singulis domibus velut deos penates, nutriebantur et venerabantur.
>
> But they thought that forests were sacrosanct, and the habitations of the gods. Snakes and serpents were nourished and worshipped in individual houses like household gods.[21]

We find very similar descriptions of the Old Prussian religious practices. One of the earliest accounts is provided by Johannes Stüler, also known

[19] Text quoted and translated by Young 2022: 52–53.
[20] Text quoted and translated by Young 2022: 64–65.
[21] Text quoted and translated by Young 2022: 68–69.

as Erasmus Stella, in his work *Antiquitates Borussicae* (1518). Stüler's account of Prussian paganism appears as a digression within a larger work on Prussian history. He is particularly focused on explaining how the Prussians acquired their religious customs through the influence of a legendary ruler, Widewuto, who he claims invited priests from the Sudovians – a neighbouring Baltic tribe – to share their religious knowledge with the Prussians. Stüler's commentary, written before the Prussian Reformation and the secularization of the duchy, reflects a time when the conversion of remaining pagan Prussians and Sudovians was intensifying (see Young 2022: 30).

> Nulla eis sacra aliquamdiu fuere, tandem in eam deducti insaniam, ut serpentes, ferasque et arbores religiose colerent, ceu de his in subsequentibus dicemus. […]
> Ad religionem autem se vertens sacerdotes a Sudinis sociis populis accersivit, qui insana superstitione contaminati eos immunda quoque animalia, ut serpentes colubres, proinde ac deorum famulos nuntiosque religiose colere docuerunt, quos intra domos nutriebant, eisque ut diis penatibus litabant.
>
> For a considerable while, nothing was sacred to them; but at last they were so far seduced into insanity that they devoutly worshipped snakes, wild animals, and trees (of which we shall speak more in what follows). […]
> But turning himself to religion, he summoned priests from the Sudovians – an allied people who, contaminated by insane superstition, taught them thenceforth to worship unclean things and also animals such as snakes and serpents as the servants and messengers of the gods. They used to feed them in their homes, and made offerings to them and the household gods.[22]

A more comprehensive account of the Old Prussian religious practices can be found in Simon Grunau's *Preussische Chronik* (1517–1529).

Grunau's descriptions have been heavily criticized, with scholars arguing that his work was significantly influenced by Adam von Bremen's descriptions of the Nordic gods and the temple at Uppsala in his *Gesta Hamburgensis Ecclesiae Pontificum* (cf. Mannhardt 1936; Jaskiewicz 1952). However, Puhvel (1987: 255; 1974: 81–82) asserts that a close comparison between the two sources reveals only limited similarities, suggesting that Grunau may represent a transitional figure between the era of eyewitness testimony and that of antiquarian

[22] Text quoted and translated by Young 2022: 74–77.

scholarship. While the possibility of contacts between Scandinavian and Baltic traditions cannot be dismissed, Grunau's depiction of the pre-Christian pantheon in early sixteenth-century Prussia merits consideration on its own terms. In his chronicle, he describes the Old Prussian gods Patols, Perkuns and Patrimps. Of particular interest in this context is Patrimps, a deity strongly associated with youth and fertility. In honour of Patrimps, a snake was kept in a large vessel that was always covered with a sheaf of hay. This sacred snake was fed milk by priestesses, referred to as *waydolottinnen*. The practice underscores the symbolic connection between Patrimps, milk-fed snakes and the themes of renewal and fertility within the Old Prussian mythological framework. Grunau provides the following description of Patrimps:

> das eine war wie ein man junger gestalt ane bardt, gekronett mit saugelen und frolich sich irbot und der gott vom getreide und hies Potrimppo. […] Dy andre seite hilt ynne das bildt Potrumppi und het vor sein cleinot eine slange, und die wardt in einem grosen toppe irnert mit milch von den waydolottinnen und stetis mit garwen des getreides bedeckt. […] Potrimppo der ander abgott der von Brudenia war, und dieser war ein gott des gluckis in streitten und sust in anderen sachin.[23]

> One was like a man of youthful shape and without a beard, crowned with ears of grain and of joyful appearance and the god of corn, and his name was Patrimps. […] The other side contained the idol of Patrimps and as his sacred object he had a snake, and that was in a large vessel, fed with milk by the priestesses, and always covered with a sheaf of hay. […] Patrimps, the other idol that was from Brudenia, was the god of luck in struggle and also in other matters.

4. The later sixteenth- and seventeenth-century sources

During the late sixteenth century and throughout the seventeenth century, an expanded array of sources becomes available from the Baltic area. Some of these texts appear to draw from earlier accounts, which can complicate the assessment of the information they present. Nevertheless, it becomes evident that a multitude of folk beliefs and enduring pre-Christian practices were prevalent among the peasantry during a period when the upper echelons of society had already embraced Christianity.

[23] Passage cited from Vėlius 2001: 66–67, 75.

In the sources from the sixteenth- and seventeenth-century, we find several passages where snakes are mentioned as household deities, often fed with milk. One such passage was written by the German aristocrat Baron Sigismund von Herberstein (1486-1566) in his *Rerum Moscoviticarum Commentarii*. The text was first published in 1549 and later amended and republished in 1551 and 1556 before being finally translated from Latin into Upper German by Herberstein himself in 1557. In this passage Herberstein describes his journey through north-western Lithuania:

> so findt man noch an heut vil abgöttereien in denselben einschichten / der etliche das feuer / etliche Pam dan Son und Man / aber ander haben jre Götter in jren heusern / das seind würmb wie die Adaxen aber grösser mit vier füssen / schwartz und dickh / bey dreyen spannen lang / etliche nennen die Giowites / ander Jastzuka / aber ander Szmya / sy haben jr zeit wann sy jren Göttern die speiß geben / setzen ain Milich in mitten jrer wonung / und khnien auf den Penckhn / so khumbt der wurm herfür / und pheifft die leut an / wie die zornige Gens / dan so betten und eheren die leut den mit vorchten an / geschicht ye ainem was widerwertigs / gibt jme selbs die schuldt / als hab er sein Gott nit wol gefuettert.[24]

> Even today one can find many pagan beliefs held by these people, some of whom worship fire, others worship the trees, the sun and the moon. However, there are others who keep their gods within their homes, which are snakes, resembling lizards but larger, with four legs, black and thick, measuring about three spans in length. Some call them *Giowites*, others *Jastzuka*, and still others *Szmya*. They have a special time when they feed their gods. They place some milk in the middle of the house and then kneel down on benches. Then the snake crawls out and hisses at the people like enraged geese and the people pray to them with great respect. If some mishap befalls them, they blame themselves for not properly feeding their gods.

Often, the parts about Baltic pagan religion are only shorter passages in works focusing on other topics, such as history or biographic accounts. But there are two texts from the sixteenth century that stand out being exclusively focused on Baltic religion, namely Maleckis's *Libellus* and Łasicki's *De diis Samagitarum*.

Jan Malecki and his son Hieronim Malecki (Johannes and Hieronymus Maletius) were Polish translators and printers based in Königsberg, the capital of the Duchy of Prussia. They produced both Latin and German

[24] Passage cited from Beyer-Thoma 2007: 359.

versions of a text which details the practices of the pagan Sudovians in Prussia. The extent of Jan Malecki's direct authorship remains uncertain, but around 1545, he sent the text to George Sabinus in the form of a letter. This letter was first published in 1551, and a decade later, Hieronim Malecki expanded upon it, incorporating additional material in the 1561 edition (see Young 2022: 30). Their *Libellus de sacrificiis et idolatria veterum Borussorum, Liuonum, aliarumque vicinarum gentium* became a foundational source for later studies on Baltic religion:

> Praeterea Lituani et Samogitae in domibus sub fornace, vel in angulo vaporarii ubi mensa stat, serpentes fovent, quos numinis instar colentes, certo anni tempore precibus sacrificuli evocant ad mensam. He vero exeuntes, per mundum linteolum conscendunt, et super mensam assident: Ubi postquam singula fercula delibarunt, rursus discedunt, seque abdunt in cavernis. Serpentibus digressis, homines laeti fercula illa praegustata comedunt, ac sperant illo anno omnia prospere sibi eventura. Quod si ad preces sacrificuli non exierint serpentes, aut fercula super mensam posita non delibaverint, tum credunt se anno illo subitures magnam calamitatem. Adhaec eaedem gentes habent inter se sortilegos, qui lingua Rutenica Burty vocantur, qui Potrympum invocantes, caeram in aquam fundunt, atque ex signis sive imaginibus inter fundendum figuratis, pronunciant ac vaticinantur de quibuscunque rebus interrogati fuerint.
>
> Furthermore, the Lithuanians and Samogitians keep snakes warm underneath the stove, or in the chimney corner where the table stands. At a certain time of year the priestlings, worshipping them as the image of a deity, call them by prayers to the table. Coming by a clean linen cloth they crawl up, and remain on the table. Having tried several dishes, they depart again, and likewise hide themselves in caves. When the snakes have gone, the people joyfully eat the pre-tasted dishes, and hope that everything will turn out prosperously that year. But if the snakes do not come out at the prayers of the priestlings, or they do not taste the dishes that have been put out, they believe a great calamity will befall them that year. And those same people have sorcerers still among them who are called *burti*[*ninkai*] in the Ruthenian language. These people, invoking Potrimpus, pour wax into water, and expound and divine from the images made during the pouring on whatever matters they are asked about.[25]

Jan Łasicki's *De diis Samagitarum* (1582) draws heavily on earlier sources, and some passages are almost verbatim reproductions from

[25] Text quoted and translated by Young 2022: 124–125.

Malecki's *Libellus*, demonstrating the lasting impact of Malecki's descriptions. The striking similarities between these passages suggest that Łasicki either copied directly from Malecki or relied on an intermediary source that preserved Malecki's descriptions:

> nutriunt etiam quasi deos penates, nigri coloris, obesos et quadrupedos, quosdam serpentes, Giuoitos vocatos. Hos timore perculsi, dum ex antris aedium ad pastum appositum prorepunt, seque pasti in ea recipiunt, aspiciunt et colunt. Si quid infortunii accidat cultori, serpentem male fuisse tractatum censent. […]
> Serpentum.
> Praeterea Lituani et Samagitae in domibus sub fornace, vel in angulo vaporarii ubi mensa stat, serpentes fovent. quos numinis instar colentes, certo anni tempore precibus sacrificuli, evocant ad mensam. Hi vero exeuntes per mundum linteolum conscendunt, et super mensam morantur. Ubi delibatis singulis ferculis, rursus discedunt, aeque abdunt in cavernis. Serpentibus digressis, homines laeti fercula praegustata comedunt, ac sperant illo anno omnia prospere sibi eventura. Quod si ad preces sacrificuli, non exierunt serpentes, aut fercula apposita non delibaverint: tum credunt se anno illo subituros magnam calamitatem. Adhaec eaedem gentes habent inter se sortilegos, qui lingua Ruthenica Burti vocantur. Ii Potrimpum invocantes, caerem in aquam fundunt, atque ex imaginibus inter fundendum expressis, pronuntiant et vaticinantur, de quibuscunque rebus interrogati fuerint.

> they also feed like gods certain household gods – black in colour, fat, and four feet long, and certain snakes called *Gyvatės*. Overpowered by fear, while the snakes crawl from the entrances of the houses to the nearby pasture, they welcome them, look at them, and worship them. If something unfortunate befalls one of the worshippers, they consider that the person treated a snake badly. […]
> The cult of snakes

> Furthermore, the Lithuanians and Samogitians keep snakes warm underneath the stove, or in the chimney corner where the table stands. At a certain time of year the priestlings, worshipping them as the image of a deity, call them by prayers to the table. Coming up by a clean linen cloth they crawl up and remain on the table. Having tried several dishes, they depart again and likewise hide themselves in caves. When the snakes have gone, the people joyfully eat the pre-tasted dishes and hope that everything will turn out prosperously that year. But if the snakes do not come out at the prayers of the priestlings, or they do not taste the dishes that have been put out, they believe a great calamity will befall them that year. And those

> same people have sorcerers still among them who are called *burti*[*ninkai*] in the Ruthenian language. These people, invoking Potrimpus, pour wax into water and expound and divine from the images made during the pouring on whatever matters they are asked about.[26]

Alessandro Guagnini in his *Sarmatiae Europeae descriptio* (1581), also mentions this practice. In the part about "the ancient religion of the Lithuanians" (*de prisca religione Lituanorum*) he writes the following about snakes as household deities:

> Viperas item atque serpentes Deos esse credebant, eisque cultum praecipuum exhibebant, et singuli patresfamilias, cives, coloni, et nobiles singulos, serpentes domi asservare solebant, quos pro Paenatibus, et laribus familiaribus adorabant, lacque et gallos gallinaceos, eis immolabant, eratque inauspicatum et exitiabile toti familiae, quempiam ex eis violasse dehonorasseve, aut domi non fovisse, tales enim, vel bonis omnibus privabantur, vel crudeliter lacerati interibant.
>
> And they believed that serpents and snakes were gods, and offered them the foremost worship. Each head of a family, citizen, inhabitant, and noble was accustomed to host snakes in their home, which they worshipped as gods of the household and family. And they made sacrifice to them of milk, chickens, and poultry products. And it was unlucky and deadly to the whole family if any one of them violated, dishonoured, or did not favour the snakes in their home; such were either deprived of all their goods, or died cruelly maimed.[27]

Further on, in the section about the Duchy of Samogitia, he again addresses the customs of keeping snakes as household deities and includes a story about the consequences of intentionally killing such a snake. While Guagnini's account is largely a synthesis based on Długosz's work (see Young 2022: 30), it introduces a few unique elements, such as this striking story illustrating the repercussions of killing a snake in an attempt to abandon pagan practices:

> Sunt etiam nunc illic inter agrestes, idolatrae complures, qui serpentes quosdam quatuor brevibus sacerdotum instar pedibus, nigro obesoque corpore Givoiitos patria lingua dictos, tanquam penates domi suae nutriunt, eosque domo lustrata certis diebus ad appositum cibum prorepentes, cum

[26] Text quoted and translated by Young 2022: 150–151; 158–159.
[27] Text quoted and translated by Young 2022: 106–107.

tota familia quoad saturati, in locum suum revertantur, timore quodam circumstantes venerantur. Quod si adversi illis quid acciderit, serpentem deum domesticum male acceptum ac saturatum esse credunt.

Accidit hoc nuper in Lithwania sex a Vilna miliaribus in pago quodam iuxta civitatem Troki, quod quidam Christianus ab eiusmodi serpentis cultore, aliquot alvearia apum emit, quem cum ad verum Christi cultum multo labore adduxisset, utque serpentem quem colebat occidere persuasisset, aliquanto post, cum ad visendas apes suas eo reversus fuisset, hominem facie deformatum, ore aures tenus, miserabilem in modum diducto offendit, tanti mali causam interrogatus, respondit sequod serpenti deo suo domestico manus nepharias iniecisset ad piaculum expiandum hac calamitate puniri, multoque, graviora si ad priores ritus suos non rediret cum pati oportere. Est etiam quatuor a Vilna miliaribus Lauariiki villa Regia, in qua a multis adhuc serpentes coluntur. Haec quamvis non in Samogitia sed in Lithwania gesta sunt, pro exemplo tamen adduxi.

And there are also many idolatries there among the rustics, who (on the instructions of their priests) nourish certain snakes like household gods that are four feet long, black, and with a fat body, and called Gyvatės in the language of the country. Having purified the house for several days, the snakes are worshipped when creeping towards food put out for them. Having been fed by the whole family, they return to their place, with those around standing in fear. But if something bad happens to them, they believe that the domestic serpent god was badly received and fed.

In a certain locality next to the town of Trakai, six miles from Vilnius, it happened recently that a certain Christian bought a number of beehives from a serpent worshipper, whom he brought to the true faith of Christ with much labour, so that he persuaded him to kill the snake he worshipped. A little while afterwards, when returning to visit his bees, he offended the man with a deformed face (with a mouth as wide as his ears), who was reduced to a miserable state. Having asked him the cause of such a great evil, he replied that he raised wicked violent hands against his domestic serpent god, and was punished in order to expiate the sin; and that he ought to have suffered more and more seriously if he had not returned to his former rites. Four miles from Vilnius is the royal village of Lavoriškės, in which many snakes are still worshipped. Although these things happened not in Samogitia but in Lithuania, I have adduced them as an example.[28]

[28] Text quoted and translated by Young 2022: 110–113.

In his *Kronika Polska* (1582), Maciej Stryjkowski writes about the connection between the deity Patrimps and snakes and also mentions the ideas of keeping house snakes and feeding them with milk:

> Po lewej zaś stronie drugi bałwan stał z miedzi na kształt węza wzdłuż zwitego, który oni zwali Patrimpos, to jest ojczystych bogiem (u Łacinników *Dii Penates*), tego zaś tak chwalili, iż każdy Żmodzin, Litwin i Prusak, węża albo żmiję w domu chował, które mlekiem karmili.[29]
>
> On the left side, the second idol stood, made of copper, in the shape of a coiled serpent, which they called Patrimpos, that is, the god of the household (among the Latins, *Dii Penates*). They revered this one so much that every Samogitian, Lithuanian, and Prussian kept a snake or viper in their house, which they fed with milk.

Stryjkowski had access to most of the earlier texts and this influence is clearly reflected in his accounts (see Mannhardt 1936: 329). Despite these shortcomings, Stryjkowski offers a significant new perspective by being the first to explicitly associate the earth god Ziemiennik with Baltic snake worship.

> Bóg Ziemiennik, albo ziemny, którego w wężów chowaniu i mlekiem karmieniu chwalili, temu też czarne kurzyce bili na ofiarę.
>
> The god Ziemiennik, or the Earth God, was venerated by keeping snakes and feeding them with milk; black hens were also sacrificed to him as an offering.

In another manuscript by Stryjkowski, which remained unpublished until the second half of the 20th century, we find an intriguing passage linking this deity with snakes and milk. This manuscript, *O początkach, wywodach... narodu litewskiego, żemojskiego i ruskiego*, National Library, Warsaw, catalog no. III 6806, 1577, includes Lithuanian phrases and passages that may reflect authentic traditions from Stryjkowski's time (see Ališauskas 2016: 65).

> Czołga się [wąż], mleka z miodem zmieszanych kosztując,
> Czerń: O Ziemiennik! – krzyczy, – Ziemiennik! – dudkując.

[29] Passage cited from Vėlius 2001: 509.

> The [serpent] crawls, tasting milk mixed with honey;
> The crowd cries, "Oh, Ziemiennik!" – shouting, – "Ziemiennik!" – murmuring.

The establishment of the Jesuit College in Vilnius in 1570 played a central role in the Counter-Reformation efforts and in promoting Catholic education and missionary activities across the Grand Duchy. The dedicated Jesuit missionaries diligently recorded their efforts in the form of annual reports (*Annuae litterae Societatis Jesu*). These reports shed light on Lithuanian religion and culture, while also documenting the ongoing struggle between the Reformation and the Counter-Reformation and the persistence of pagan Lithuanian beliefs.

As Vėlius (2001: 617) remarks, the Jesuits obtained firsthand knowledge of Lithuanian pagan customs directly from the practitioners themselves, suggesting they did not solely rely on pre-existing written sources. Importantly, the Jesuits possessed a working knowledge of the Lithuanian language, a prerequisite for effectively conducting their missions. Nevertheless, the accounts capture a relatively late stage of the pre-Christian religious practices, at a time when they had largely disappeared among the ruling classes and persisted primarily within peasant communities. In this context, the worship of agricultural deities and guardians of crops assumed greater prominence, accompanied by festivals aligned with the farming calendar and labour cycles.

One noteworthy report, dated 1604 (*Annuae literae Societatis Jesu*, vol. 21), provides a detailed account of the symbolic connection between snakes and milk:

> Illud dumtaxat adijcio, eo dementiae prolapsos homines, vt serpentibus numen inesse credant, quocirca diligentissime cauent, ne quis eis, quos domi seruant, vim inferat; quod graue periculum se passuros, ob iniuriam illatam omnientur, acciditque interdum, ecundum fidem illorum, vt nonnunquam serpentes, ab vberibus vaccarum dependentes, et lac exugentes reperiantur, eam ob causam, cum quidam noster perimere vnum vellet, homo quidam vanis precibus egit, vt eum a proposito auerteret, cum non proficeret, serpentem manu arreptum fugiens abscondit.[30]

> The people have reached such a stage of madness that they believe that deity exists in reptiles. Therefore they carefully safeguard them, lest someone injure the reptiles kept inside their homes. Superstitiously they believe

[30] Passage cited from Vėlius 2001: 622.

> that harm would come to them, should anyone show disrespect to these reptiles. It sometimes happens that reptiles are encountered sucking milk from cows. Some of us (monks) occasionally have tried to pull one off, but invariably the farmer would plead in vain to dissuade us. […] When pleading failed, the man would seize the reptile with his hands and run away to hide it.[31]

A later report, dating from 1725–1726, is quoted by Ališauskas (2016: 329–331).

> Ab ethnico *deyviorum* cultu reducti inpauci. Sunt enim in confine Curlandiae de ethnicismo residui *Deiviey Pagirney*, id est dij, qui interdum sub specie anguium de angulis suis egrediuntur, sed frequenter degunt invisibiles, sic tamquam frusto terrae impacti, ut in angulis annuli inclusi. Terra illa observari solet in ollis argilareis aut vasis ligneis, aut sine vase sub assere. Cui terrae an daemoni nisi certus praestaretur cultus, certus interitus. Colit autem potissimum primitivis cibi et potus.
>
> There has not been a complete withdrawal from the pagan worship of deities. For there are, indeed, on the border of Courland, remnants of paganism: *Deiviey Pagirney*, that is, gods, who sometimes emerge from their corners in the form of serpents, but frequently dwell invisible, as if pressed into a lump of earth, like rings embedded into a corner That earth is customarily kept in clay pots or wooden vessels, or without any vessel under a plank. If proper respect is not shown to this earth or demon, certain destruction follows. They are most revered with the first offerings of food and drink.

In the later eighteenth-century accounts from the Baltic countries, we find numerous additional references to customs and stories involving house snakes. Moreover, as Luven (2001) demonstrates, folklore from the nineteenth and twentieth centuries is equally rich in such narratives.

5. Conclusion and possible Indo-European roots

The historical records paint a complex picture of the possible presence of house snakes among the ancient Balts. While the full extent of this practice remains difficult to determine, it is evident that snakes held considerable cultural and symbolic significance, particularly on a domestic level. As liminal beings, house snakes symbolized a contract: offerings of milk secured their goodwill, while neglect or harm could result in

[31] Translation by Gimbutas 1958: 33.

misfortune – illness in cattle, decreased milk production, or other calamities. This dynamic parallels Indo-European hospitality motifs, where violations of reciprocity disrupt cosmic and social harmony.

As discussed in the chapter by Anders Jørgensen in this volume, the reconstructed Proto-Indo-European term *$g^{w}o\underset{\sim}{u}$-$d^{h}eh_{1}$- ("cow-suckler") is particularly illuminating. Semantics consistently link the reflexes of this term with reptiles and other chthonic creatures, suggesting an ancient belief in milk-seeking reptiles. Jørgensen argues that this reconstruction indicates that the concept of cow-suckling, chthonic animals among Indo-European-speaking communities may, at least in part, stem from a shared proto-stage rather than being merely an areal phenomenon. This belief was likely further shaped by the transition to agrarian societies, when rituals to appease household deities – liminal beings like snakes – became central to ensuring prosperity and fertility.

Understanding the role of household deities, such as house snakes, requires an ecological perspective that explores their dual nature as both protectors of cattle and potential threats to milk supplies. The concept of house snakes as household deities reflects early pastoralist challenges, such as predation, udder infections and the need to manage the boundaries between domestic and untamed spaces. These concerns were ritualized, embedding snakes within a cosmological framework grounded in reciprocity and guest-host relationships. This broader perspective contrasts with Peter Jackson Rova's exploration of cattle-stealing monsters in this volume, which highlights how Indo-European mythology encodes anxieties about hospitality and wealth distribution. It also intersects with Riccardo Ginevra's discussion on the mythological positioning of serpentine beings at the fringes of the Indo-European world.

By situating these practices within the broader framework of Indo-European religious and cultural traditions, we can gain a deeper understanding of the role of house snakes and their symbolism in the ancient Baltic worldview, as well as their broader cultural and religious significance.

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9. Afterword
The milk-drinking and milk-suckling snake revisited

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Abstract

This chapter revisits an earlier contribution (Ermacora 2017) that explored the ubiquitous folkloric motif of milk-drinking and milk-suckling snakes across Europe, America, Asia and Africa. While tracing the motif's cross-cultural variants and its diffusion, the analysis points to potential IE roots while also acknowledging parallels in Africa. The chapter contends that this myth encapsulates vernacular perceptions of animal agency, as demonstrated by snakes exhibiting anthropomorphic behaviour with a craving for mother's milk. Additionally, the chapter places artistic depictions of snake-tormented women in medieval hellscapes within misogynistic tropes, where punishment for sinful behaviour is manifested through snakes suckling the sinner's breasts. Ultimately, this research sheds light on the various symbolic meanings and the enduring appeal of the breast-suckling snake motif.

> No woman, however, would nurse a snake, if snakes could be taught to suck. (Williams 1950: 142)

1. Introduction

In August 2022, I was interviewed via email by RumorScanner, a fact-checking organisation from Bangladesh.[1] The primary aim of RumorScanner, as with other similar sites, is to combat misinformation and hoaxes through evidence-based analysis. They declare information as

[1] I am grateful to Simon Young for useful comments and to Michele Lodone for pointing out the relevant passage in the *Legenda* of Tommasuccio.

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'true' or 'false' or reference what 'scientists say'. Their central question here was straightforward: is it possible for snakes to drink milk? (RS Team 2022; for a similar approach, see Schmucker 2018; Reuters Fact Check 2021). The belief that snakes, notably cobras, drink milk and can thus be fed with milk is well known in Bangladesh and more broadly across the Indian subcontinent (e.g. Alter 1992: 114–116, 122–129, 133–134; Lange 2019; Hazel 2019a: 105, 111–123, 186, 329; 2019b: 97; Stone Age Herbalist 2024). Snakes' craving for milk is so strong that cobras are often believed to suck milk from cows' udders or from women's breasts. These stories typically manifest in the form of "old rustic fables" (Anonymous 1910), a complex of belief narratives about milk-drinking and milk-suckling snakes "that address both mundane and supernatural topics and [that] shape our perception of reality" (Valk 2022: 16; for more on the 'belief narrative' concept, see Valk 2021).

The Bangladeshi editor had come across an article I published in 2017. In that article, I explored the cross-cultural myth of the milk-suckling reptile – for a myth it is.[2] The body of relevant documentation is vast, spanning from pre-modern times to the contemporary period. Evidence ranges from Latin America (where the concept of milk-suckling reptiles does not appear to be indigenous; e.g. Gondim 2022: 631–632) to much of Eurasia, including South Asia. This distribution not only underscores the "archaic roots" (Adámek 2017: 59) of the myth but also illustrates its dynamic evolution across cultures (Ermacora 2017; for recent discussions on milk-drinking and milk-stealing reptiles and similar animals, see also Behr-Glinka 2015; Rölleke 2015; 2020; Adámek 2017; Dillinger 2017; 2022: 222–229;

[2] I take this opportunity to make some additions and corrections to my earlier argument. In Ermacora 2017: 70 I proposed that southern Dutch vernacular words for the nightjar (such as *vliegende pad* 'flying toad') may be related to the alleged fondness of toads and nightjars for milk. Rob Lenders kindly remarked to me that the nightjar produces a sound similar to the Natterjack toad's (*Epidalea calamita*): "this is the real reason why the nightjar is called 'flying toad' in the southern part of the Netherlands" (pers. comm., August 2017; see also Blok & ter Stege 2008: 148; Eigenhuis 2020). I find this explanation convincing. In Ermacora 2017: 66 I collected evidence from the Middle Ages onwards of tales featuring the motif of the golden breast suckled by a snake; a modern Greek variant can be read in Alexiou & Cairns 2017: 413–419. For a more pragmatic interpretation (unrelated to folklore) of the *Ṛgveda* passage featuring the *godhā* and the buffalo, as discussed in Ermacora 2017: 71, see now Del Toso 2023. To the list of folklore motifs also relevant to this chapter provided in Ermacora 2017: 61, add B391.1.0.1* 'Child feeds toad from milk bottle' (Read MacDonald & Sturm 2001: 71).

Whittaker 2017; Zenoni 2019: 492–496; Hazel 2019a; 2019b; Dvořák 2019: 218; Witczak 2020; Kõiva & Boganeva 2020; 2022; Stifter 2021; Bataller Català 2021: 34–37; Shemesh 2022; Foehr-Janssens 2022: 87–92; Witczak, Kowalski & Rychło 2023; Govaerts, Lenders 2023; Nissan 2023; Rychło, Kaczyńska, Kowalski & Witczak 2024; Sterza 2024; Kowalski, Rychło & Witczak 2024). For clarity's sake, snakes do *not* drink milk. They lack the ability to digest milk and they cannot suck it (Lenders & Janssen 2014: 340; Ermacora 2017: 61–62; Hazel 2019a: 119). Still, as many have observed, the concept of the milk-drinking and suckling snake remains a resilient and widespread notion (see the online discussions by Espino 2013; Beach Combing 2015; 2016; Rowsell 2018; Schmucker 2018; Lincos 2019; Stone Age Herbalist 2024). Additionally, milk-suckling snakes occasionally make appearances in literary fiction.[3]

2. Origins

Why is this myth so persistent? In my email response, I highlighted the tradition of viewing the reptile as an ancestor, evident in the domestic worship of benevolent snakes (see Luven 2001; Lenders & Janssen 2014; Behr-Glinka 2015; Adámek 2017; Kowalski, Rychło & Witczak 2024: 42, as well as Larsson in this volume). I also emphasized the symbolic importance of milk as a source of life (e.g. Dundes 1980: 93–133; Rosenblum 2020; Rogers 2023). In pastoral cultures, milk is revered as "the best of food", making it a valuable resource for offerings and libations (Hazel 2019a: 371, 384, 403). However, I also acknowledged that explaining one myth (the fondness of snakes for milk) using another (the 'reptile as ancestor') is unsatisfactory. This should not be confused

[3] Consider, for instance, Dahl 1946: 24–38 for a short story set in Kenya in 1939 about a black mamba sucking milk from a cow. Dahl had a talent for incorporating folklore into his works, and this has been acknowledged: see Burger 2002: 142–143; Huenemann 2011: 39–41, drawing parallels to legends from both Africa and Europe (compare cats milking cows in Tanzania and Slovenia: Anonymous 1933; Arewa 1966: 178–179). Interestingly, Dahl faced challenges in getting his snake story published because of its implausible nature. His literary agent even reached out to the American Museum of Natural History, seeking expert commentary on the possibility of snakes sucking milk. The herpetologist Charles Bogert (1908–1992) confirmed that such an act was impossible, leading to a publisher rejecting the story. Dahl expressed his frustration in a private letter, complaining "that if Dr. Bogert or any of his learned friends go to Africa and talk to some of the native tribes there, they will tell them they have seen that sort of thing happen" (Sturrock 2010: 112–113, 197, 202; see also Huenemann 2011: 40).

with "an abdication of interpretative responsibility" (Falk 2020). A more holistic perspective might tie the idea of the milk-suckling snake to our inclination "to interpret the animal subjects as always partially human" (Barker & Povinelli 2021b: 100). The reptile is perceived as behaving in a human-like manner, relishing milk as a guest would, and even intentionally attaching itself to a woman's breast, appearing as a substitute for a child (Foehr-Janssens 2016: 327; Adámek 2017: 59). The persistent theme of anthropomorphism in our representation of animals lies at the heart of this discussion.[4] We must question *why* human-like behaviours attributed to snakes resonate so deeply with us. Numerous scholars have also argued that beliefs about ancestor worship intersected with practical concerns, such as insufficient breast milk production or poor milk yield in cows. A sudden decrease in milk production was often attributed to external, that is, supernatural causes (Moreno 1999: 167; Beach Combing 2015; 2016; Adámek 2017: 62; Hazel 2019a: 119; Witczak 2020; Kõiva & Boganeva 2020; 2022; Witczak, Kowalski & Rychło 2023: 360; Rodríguez García 2024: 67; Sterza 2024: 177, 195).

Two chapters in this volume touched on the subject of my 2017 article.[5] The well-documented custom of snake worship in the Baltic regions was mentioned there, "a practice alluded to in virtually every lat[e] medieval and early modern account of Lithuanian religion" (Young 2022: 11, 23, 25–26, 29). Historical sources suggest that domestic snakes were believed to be reincarnations of humans and were given milk as offerings. Additionally, snakes milking cows emerge as a motif in post-medieval Baltic folklore and linguistics (Loorits 1949: 341–346; Eckert 1998: 95, 100; Luven 2001; Ermacora 2017: 64; Witczak 2020: 148; Witczak, Kowalski & Rychło 2023; Rychło,

[4] This mode of thought is subtly reflected in contemporary scientific research on comparative psychology and animal cognition: for a critique, see Barker & Povinelli 2021a. *Mutatis mutandis*, anthropomorphism informs empirical experiments aiming to (dis)prove that snakes drink milk: see Ermacora 2017: 61–62 and the previous note. Thompson (2019) is an important theoretical work for vernacular attitudes to animal personhood.

[5] In this volume, Anders Kaliff, Birgit Anette Olsen and Peter Jackson Rova engage to some extent with my 2017 paper, drawing connections between the milk-suckling reptile and a complex of IE cattle-raiding and creation myths. While these pastoral myths do revolve around livestock and establish associations between snakes and milk, my feeling is that the parallels are not yet strong enough. A similar yet more radical approach has been recently attempted by Kowalski, Rychło & Witczak (2024: 41–42), who interpret the milk-suckling reptile as a "variant of the Indo-European myth of the thunderer's battle with a chthonic monster".

Kaczyńska, Kowalski & Witczak 2024: 91–92). Among the earliest references is Jan Długosz (1455–1480) in his chronicle *Historiae Polonicae* 10, on the Lithuanians: "Furthermore, the houses of individual men (*singulorum hominum*) generally used to contain snakes and serpents, to whom they offered milk as nourishment" (Latin text and translation in Young 2022: 52–53). In this volume, Jenny Larsson has compiled 20 relevant passages (including Długosz) from the fourteenth to the seventeenth centuries. Building on Luven (2001), she has incorporated modern Lithuanian and Latvian tales about milk-drinking and milk-suckling snakes. This poses intriguing questions concerning the *longue durèe* of Baltic attitudes towards house snakes.

In a similar vein, in this volume, Anders Jørgensen has undertaken a meticulous linguistic investigation into the Core Indo-European (IE) term 'cow-suckler'. This compound appears in various zoonyms for what he designates as "chthonic animals". These are small creatures that typically live just beneath the ground's surface, such as snakes, toads, worms and lizards – all of which are believed to steal milk from cows. Scholars are increasingly "skeptical of building general cultural histories […] based on comparisons" (Thomas 2020, referring to archaeology). Nonetheless, comparison remains invaluable, especially when rooted in linguistics and/or when examining motifs – small narrative units that can be evaluated cross-culturally. In Ermacora (2017: 69–71), I emphasized the significance of IE linguistics, suggesting that interdisciplinary collaboration is crucial for a comprehensive study of the milk-suckling reptile theme. As it happens, two foundational principles stand out in IE linguistic research: first, language structures can directly mirror the beliefs and culture of their speakers. Second, when language structures are consistently observed across vast linguistically related regions, it is plausible to infer that these are "independent derivatives based on shared inherited material", and that they can be usefully traced back into the distant past (see Watkins 1995: 7–11; West 2007; I am quoting Jørgensen here).

In Ermacora (2017: 69–71), I cautiously titled a subsection "A belief of the Indo-European age?" The inclusion of the question mark stemmed from evidence that both ancient and modern Egyptians offered milk to snakes. Furthermore, the concept of the 'snake as ancestor' being nourished with milk is also recorded in North Africa and among numerous sub-Saharan African tribes (Anonymous 1894; Westermarck 1926: 350–351; Hazel 2019a; 2019b; see further below for Africa). I have no new insights to contribute to my earlier discussion,

though it is worth noting that the earliest sources on pre-Christian Slavic religion are silent on house snakes (Álvarez-Pedrosa 2021; contrast Young 2022 for the Baltic context).[6] Recently, linguists have analysed dozens of animal names from IE languages that can be traced to linguistic formations such as 'cow + suckling' (and similar ones). They have highlighted, on the one hand, the great antiquity of the concept of the milk-suckling reptile, and, on the other, its supposed IE origins (Rowsell 2018; Witczak 2020; Witczak, Kowalski & Rychło 2023; Rychło, Kaczyńska, Kowalski & Witczak 2024). While the documentation is impressive and the linguistic discussion particularly convincing, further focused research is warranted, especially regarding the pre-modern aspects of this topic and its implications within the non-IE cultural-linguistic sphere.[7] I limit myself to supporting Jørgensen's conclusion that "The belief in cow-suckling, chthonic animals among speakers of Indo-European languages may at least in part be inherited from a shared proto-stage [= Proto-IE] rather than a purely areal phenomenon". Jørgensen's linguistic analysis reveals that Breton and Cornish terms for the earthworm, first documented in the late fifteenth century, represent additional Western reflexes of the Core-IE 'cow-suckler' compound.

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[6] In modern times, house snakes appear in pan-Slavic folklore, often associated with milk-drinking and milk-suckling behaviours (Eckert 1998; Behr-Glinka 2015; Adámek 2017; Witczak 2020). There is an early medieval Arabic zoographic work that describes snakes suckling milk from cows in the Slavic lands. This is a crucial piece of ethnographic evidence for researchers seeking early attestations of similar beliefs: Ermacora 2017: 65, 71–72; Witczak, Kowalski & Rychło 2023: 361–362; Rychło, Kaczyńska, Kowalski & Witczak 2024: 87, 92; Kowalski, Rychło & Witczak 2024. An even earlier and shorter passage – so far overlooked by scholars – describing snakes/dragons (*vishaps*) suckling livestock appears in a fifth-century Armenian text: Adontz 1925–1926: 352; Khachikyan 1964: 326.

[7] While the concept of the milk-drinking snake is undoubtedly ancient and intrinsically linked to the archaic pan-European domestic snake cult (Luven 2001; Behr-Glinka 2015; Adámek 2017), its precise age remains questionable. Rychło, Kaczyńska, Kowalski & Witczak (2024: 97) identify the 'cow-suckler' in Hittite and Luwian names for 'toad' dating to the second millennium BCE and argue that this "has its roots in the oldest layer of prehistoric folklore". Delpech (2021: 71–72) suggests that the milk-drinking snake "perhaps has prehistoric roots". Hazel (2019a: 184–185), drawing heavily on Marija Gimbutas (1921–1994), similarly proposes a pre-IE prehistoric origin. However, Hazel's claims are undermined by inaccurate statements, such as "The Semitic languages are part of the Indo-European linguistic family, just like Lithuanian".

3. Breastfeeding snakes

In the following discussion, I will return to the idea that snakes can suckle from human breasts and consume nurturing milk, an idea that may be viewed as an "elaboration on the theme of cyclical human regeneration" (Binde 1999: 224). In my 2017 paper, I referenced European sources spanning from antiquity to the modern era (Ermacora 2017). I can now introduce additional parallels from Italy and Africa.[8] Per Binde has conveniently summarized three stories widely documented in Italy (and Iberia):

> At night, a snake could steal mother's milk by crawling up in[to] the bed where a mother and her baby were sleeping. It sucked the mother's breasts while it inserted its tail into the mouth of the child, so that the child would have an impression that it was sucking at its mother's breast and would thus not cry.

A variant of this tale has the snake inserting "its tail into the mouth of a baby so that it vomited [the] mother's milk, which the snake then drank". Alternatively, a snake "could [also] enter, through the mouth, into the stomach of a mother while she was sleeping, and there feed on her milk, or into the stomach of a child, where it fed on mother's milk that the child had drunk" (Binde 1999: 224; see also Ermacora 2017: 63–64; Rodríguez García 2024: 67). On occasion, it is added that the snakes descended from the roof of the house at night to take milk (see Zenoni 2019: 492–493; Gatta & De Meo 2022: 132 for Lazio and Abruzzo, respectively). The earliest source for this that I am aware of, and one that I was not acquainted with in 2017, is the *Legenda* of the hermit and travelling preacher Tommasuccio of Foligno (*c.* 1319–1404), a text that can be dated to the first half of the fifteenth century:

[8] As I hinted in Ermacora 2017: 72, there is still more work to be done on the milk-drinking and milk-suckling snake concept in China. François-Xavier d'Entrecolles (1664–1741), a Jesuit missionary in China, mentioned in a 1712 letter the "extraordinary events and wonders that occur [there], such as the monsters that are born at certain times". D'Entrecolles went on to provide three examples, one of which is the following story. In Fuzhou 福州, located in the Fujian 福建 province, "only two years ago […] there occurred a case where a woman was delivered of a serpent which she later suckled" (Tichane 1983: 52; see d'Entrecolles 1717: 256 for the original French). The extraordinary and the marvellous often found their place in seventeenth- and eighteenth-century written descriptions of Asia by Jesuits, and it is not uncommon to come across Jesuits writing about 'curious' tales drawn from local folklore (Van Staen 2016). For a striking instance, see Ermacora (2020: 119–120).

> Still in the city of Arezzo a widowed woman had a snake in her house. Every time the woman went to bed this snake would come down from the roof, go to the woman and nurse from her (*lì la poppava*) despite the fact that the woman made a noise [in attempting to escape]. After having suckled from her (*quando l'aveva poppata*) [the snake] would flee. For this [reason] the woman wanted to leave her house. One day this woman recommended herself to Blessed Tommasuccio and revealed the way in which the snake was harassing her. Blessed Tommasuccio replied that the woman should make sure that he saw it. And so [Tommasuccio] went to the woman's house with his companions, and there he stayed until the snake came out to suckle the woman as it usually did. When the woman saw it coming, she began to scream. When Blessed Tommasuccio saw it coming, he commanded in the name of God [the snake] should stop, that it should not proceed any further forward; and [the snake] went back [to the roof]. Since then that snake was never seen in that house again, and so the woman was freed from that false beast (*falsa bestia*). (Italian text in Montefusco 2020: 298–299, who recognised folklore here)

Turning to African sources, in the former British Togoland (Ghana and Togo), locals reported a species of non-venomous snake with an affinity for women's milk, often found suckling from women (Cardinall 1931: 114). In a Fulani tale, a woman gives birth to both a child and an egg, from which a snake emerges: this narrative presents yet another instance of the widespread 'reptile-twin' theme (Ermacora 2022; 2023). The parents confine the snake-twin in a hut/barn, caring for it as they would their human child and providing it daily sustenance with milk. In a reciprocal gesture, the secretly harboured reptile grants them a 'magical' bounty of sheep. Upon the demise of the parents, the human sibling assumes the responsibility of caring for his snake-brother, until his wife discovers the animal (Seydou 2009; Martin 2010: 21–22; Hazel 2019a: 107, 241–242). A Serer version includes breastfeeding. Here, the mother nourishes the snake with one breast while the human child feeds from the other. Over time, as the snake-twin grows and strengthens, it begins to consume both the mother's milk and her blood (Gravrand 1990: 319). Another Serer tale depicts an offering of blood and milk to the snake-twin, albeit not directly from the breasts (Zempléni 1974: 42–43). An important parallel can be found in ancient literature: the nightmarish dream of Clytemnestra in Aeschylus's *Oresteia*. She envisions giving birth to a snake, a double of her son Orestes, born from the same womb: the animal, wrapped in swaddling bands, feeds from her breast, drawing both milk and blood

(*Choephori* 526–550, 928). This dream has prophetic undertones. Having been nurtured by Clytemnestra, Orestes will eventually cause his mother's death. Scholars concur that Aeschylus might have incorporated in his narrative elements from the milk-suckling snake folklore (Ermacora 2017: 65; Brillante 2018: 33; Martina 2021a: 316; 2021b: 349; Shemesh 2022: 689).[9]

4. *Femmes-aux-serpents* and punitive snakes

Breast-suckling snakes are a widespread motif in belief and narrative. Can a connection be drawn between medieval Romanesque art, folklore and the *histoire des mentalités*? There are numerous representations of women, whether nude, semi-nude or fully dressed, with snakes (or occasionally toads) attached to their breasts. Termed *femme-aux-serpents* in the nineteenth century, this iconographic motif was prevalent in Western European sacred architecture during the Middle Ages, often carved into church capitals (Weir & Jerman 1986). The *femme-aux-serpents* seems to have first emerged in Cluniac settings in France and northern Spain during the late eleventh century and first half of the twelfth century, with examples from this region being particularly abundant (Guesuraga 2019).[10] Drawing on Leclercq-Kadamer (1975:

[9] Note that there are some pre-modern European accounts in which women experience premonitory dreams of being pregnant with snakes, symbolizing their children. In these dreams, the snakes announce the birth of an important man or may later prove to be the cause of the mother's death (Dunham Kelchner 1935: 117–118; Hatto 1968; Ermacora 2022: 68–70). The only other account I am aware of regarding a snake being breastfed – which Ziolkowski (2004: 70) views as "a striking parallel [of Aeschylus] derived no doubt from common folkloristic sources" – is from Wolfram von Eschenbach's early thirteenth-century work *Parzival* 2: 104 and 9: 476. In this work, Queen Herzeloyde, Parzival's mother, has a dream: "It seemed to her, weirdly, as if she were wet-nurse to a worm (*wurmes*, also 'snake, dragon'), which afterwards tore apart her womb, and as if a dragon (*trache*) sucked at her breasts, and flew fast from her, so that she never beheld it again. It tore her heart out of her body. Such horrors her eyes were forced to see that seldom has a woman ever seen greater anguish in her sleep". Later, the hermit Trevrizent addresses Parzival, saying: "You were the beast that [your mother Herzeloyde] suckled there, and the dragon (*trache*) that flew away from her. It all occurred to her in her sleep, before that gentle lady gave birth to you" (Middle High German text in Lachmann, Knecht & Schirok 2003: 106; translation in Edwards 2004: 33; see Hatto 1968; Fischer 1978: 117–122; Bachorski 2000: 103–110). Interestingly, Magyar (2021: 210) has a modern story of a Hungarian woman who dreams of a large snake slithering up to her and suckling at her nipple.

[10] Medieval evidence from Scandinavia is frequently overlooked. There are representations of what might be 'bad mothers' being suckled by snakes or snake-like animals (possibly basilisks) in Danish and Swedish Romanesque tympana, baptismal

37–43), many scholars have argued that the *femme-aux-serpents* was inspired by Roman iconography. Specifically, they point to depictions of the goddesses *Tellus*/*Terra Mater*/*Gaia* breastfeeding animals as an allegorical personification of a fertile earth divinity. However, Raphaël Guesuraga has urged caution, suggesting that the *femme-aux-serpents* motif developed independently of any ancient 'prototype' (*pro*: Luyster 2001: 174–175; Berlioz 2003: 94–102; Martínez de Lagos 2010: 152–156; 2014: 52–53, 64; 2017: 27–33, 43; Dittmar, Maillet & Questiaux 2011; Leclercq-Marx 2014: 203–205; Invernizzi & Piacentini 2018: 156–159; *contra*: Guesuraga 2019).[11]

Explanations for the *femme-aux-serpents* vary, and several scholars have identified the milk-suckling snake story complex as a potential parallel (see McCulloch 1920: 410; Fromage 1967: 131–133; La Barre 1969: 96; Brodman 1992; Tenreiro Bermúdez 2007: 273; Torrez Paz 2017: 152; Pérez-Flores 2020: 49–50, 56; Thonemann 2021: 79). Yet the association is not solely based on morphological similarities. In folklore and sculpture alike, the breastfeeding snake motif appears in ways that stigmatize the female body. In interpreting the visual significance of *femmes-aux-serpents*, many art historians have leaned on Christian tradition, examining negative portrayals associated with sin. Given the allegorical intimacy between the deceitful serpent and the Biblical Eve, the snake evolved during the Middle Ages into a symbol of lust, cupidity and luxury. The association between Eve, humanity's first woman, and the serpent "also communicated a sinister and worrisome message about women in general – particularly how they were by nature untrustworthy and in need of governance" (Milliken 2012: 109; see Charlesworth 2010; Ogden 2021 for the snake's role in Christianity). As a result, the *femme-aux-serpents*, with her prom-

fonts and Gothic church frescoes: see Odenius 1961; Mitchell 2019: 121; Laursen 2019: 232–233, with previous literature.

[11] Overly enthusiastic theories have sought to connect the *femme-aux-serpents* with pagan or prehistoric mythologies (e.g. Fromage 1967: 131–134; Pillard 1976; Markale 1996: 78). Others have traced its ultimate origins to ancient Egyptian iconographic types (Lenoir 1809: 101–102, table IX; Leclant 1978: 571). Among the earlier iconographic depictions of the *femme-aux-serpents* (there are earlier examples: Martínez de Lagos 2010: 148; 2014: 46), one particularly expressive relief stands out. Dated approximately 1115–1131, this relief is found on the colonnade of Abbaye St. Pierre de Moissac, France, and notably is "the first of that type to have a toad at her pudenda […] More frequent is the depiction of the *femme-aux-serpents* with the toad at her breast; the toad thereby may replace one of the snakes" (Luyster 2001: 165, 180). For further insights on Moissac, see Bleeke (2017: 52–86).

inently displayed snake-bitten breasts, is regularly interpreted as a personification of carnal seduction (Lust) and/or bad motherhood; sexual undertones are either absent or slight for the bad mother (Weir & Jerman 1986; Röckelein 1988; Luyster 2001; Martínez de Lagos 2017; Guesuraga 2019; see Bleeke 2017: 52–86 for some discontent against traditional interpretations).

The notion that "parenting failures" (Henning 2021: 69) are frequently represented – implying that the *femme-aux-serpents* symbolizes flawed motherhood – is supported by the recurring 'punitive breast-suckling snake', in late antique Christian, Arab and Byzantine texts and associated iconography. Popular Old Testament pseudepigrapha describe women with snakes drinking (*bibebant*) or suckling (*suggentes*) milk from their breasts, as these women had withheld their milk from infants and orphans. A notable example is the mid-sixth-century *Visio Beati Esdrae*, a Latin text with four recensions probably based upon a late antique Greek Christian or Jewish *Urtext* (Borsje 1996: 249–267; Zillhardt 2000; Longoni 2004; Bauckham 2010: 329–330, offering additional parallels from Christian apocalyptic and even Iranian literature).[12] Furthermore, the 'social category' of evil mothers, condemned to nourish snakes, emerges as a dominant theme in both iconographic and literary depictions of hell. This theme is traceable as far back as the eighth century and is especially prominent in Arab literature. It prompted conjecture about whether the *femme-aux-serpents* draws from this tradition, perhaps influenced by Byzantine intermediaries (Longoni 2004; Martínez de Lagos 2017: 39). Indeed, such representations of punishment resonate with the tenets of Islamic retributive justice. In Arab sources, snake-suckled women were described as those

[12] The Latin *passio* of Christina of Bolsena or Tyre, written before the late seventh century, has a complex textual history and it is believed to be based on an original late antique Greek version (Pignot 2017). In this narrative, a snake-sorcerer, identified as a Marso in some recensions, dispatches two, four or six snakes (the number varies across recensions) to target Christina. Yet these creatures do not injure her. Instead, a pair of snakes is described as miraculously hanging from her breasts like babies. These snakes subsequently turn on the snake-sorcerer, delivering a fatal bite (Gaffier 1972; Cross & Tuplin 1980: 185–186, 233–234; Ogden 2021: 251). The *passio* draws a parallel between the snakes and the act of breastfeeding using a comparative conjunction 'just as' (*tamquam duo lactantes parvuli, velut infantes lactantes* and so on). Easton (1994: 97, 114) and McCarthy (2019: 52–53) suggest a connection between Christina and the *femmes-aux-serpents* based on a shared inversion of acceptable womanhood. I contest this interpretation regarding Christina. Her tale does not portray literal breastfeeding, something stressed by Levinson-Emley (2017: 142) in her discussion of William Paris's late fourteenth-century *Life of St. Christina*.

who denied breastfeeding, only pretended to nourish their children or orphans (with the snakes representing the murdered infants), poisoned, carried out abortions or were condemned for adultery and prostitution (Longoni 2004: 190–210, 218–219, 226; Martínez de Lagos 2010: 151–152; Menna 2019: 105; Guitton 2022: 116–117).

The breast-suckling snake in Byzantine art, encapsulating the broader "continuing Byzantine tradition of women tortured by snakes" (Warland 2020), has not received the attention it deserves from historians of Western art (e.g. Maillet 2017: 13). Meyer (2009) emphasizes that the association of snakes with the breasts of women in Byzantine religious iconography did not emerge until the ninth century, an observation that is supported by other researchers (Martínez de Lagos 2017: 39–40; Guesuraga 2019). Influences from early Christian texts and possibly the Islamic imagination shaped Byzantine representations of "punitive breast-suckling snakes" found in Last Judgments painted in churches across Crete, Anatolia, Cappadocia and Syria between the tenth and fourteenth centuries (as discussed by Thierry 1967; Zillhardt 2000: 192–195; Jolivet-Lévy 2007: 81; Menna 2019: 100–106; see also, for Crete, the useful catalogue Lymberopoulou & Duits 2020).[13] In the West, numerous medieval texts present the motif of the breast-suckling snake as a torment for "negative moralizing figures" (Bleeke 2017: 62), including figures like bad mothers and nurses. These texts provide valuable context for the associated iconography of the *femme-aux-serpents* where women are depicted with snakes biting their breasts, as a fitting punishment for their sins (for texts: Herbert 1910: 9, 210, 475, 502, 545, 611; Zillhardt 2000; Guesuraga 2019). The *locus classicus* is the *Visio Alberici* 4, written *c.* 1123–1137. This work, with a convoluted textual history suggesting co-authorship (Giani 2020), details an otherworldly vision experienced in childhood by the Italian Benedictine monk Alberico da Settefrati. In the *Visio Alberici*, sinful women are forced to suckle snakes as retribution for neglecting to feed needy children:

> I saw women with breasts hanging transfixed [inside thorny trees], and two serpents were suckling (*ebibebant*) the breasts of each one of them. Saint Peter spoke about these women. He said that they were those who

[13] For the post-Byzantine world see, for example, Weyl Carr (2020) for a late fifteenth-century church painting from Venetian Cyprus: a naked woman who either had an abortion or refused to nurse her children hangs head down and is punished with a snake biting her breasts.

> were unwilling to give their breasts for drinking to orphans and those without mothers, or they were pretending to give and did not give. (Original Latin text in Schmidt 1997: 28; translation in Luyster 2001: 178, slightly modified).[14]

We should ask ourselves what kind of effect images of snakes attacking female human bodies, as depicted by medieval sculptors and painters, had on medieval men and women. Given that "religious art was familiar to all classes of society" (Shahar 2003: 278), how might viewers have interpreted the *femmes-aux-serpents* as a frightening warning against sin? Might the viewers of these impressive Romanesque images have connected them to the milk-suckling story complex? In the absence of concrete evidence, it is speculative to suggest one as direct inspiration for the other. However, even though milk does not appear in *femme-aux-serpents* figures (for understandable reasons), nothing would have prevented viewers from interpreting the penitential snakes, painfully attached to women's breasts, in light of local tales about milk-suckling serpents. This may have been the case even if, as Guesuraga has argued, the snakes were actually devouring rather than suckling the women's breasts in these images: "Breastfeeding and clothing do not seem compatible", he stated, suggesting the clothed *femme-aux-serpents* "should rather be seen as a scene of devouring. It is not easy to breastfeed when you are dressed from head to toe". Guesuraga cited several medieval texts, dating from the ninth century to the fourteenth, that explicitly depict punitive snakes as greedily and gruesomely consuming (rather than suckling) sinners' breasts as eternal punishment (Guesuraga 2019; see also Martínez de Lagos 2017: 39–43; Guitton 2022: 116).

By highlighting the ambivalence between biting/gnawing and suckling, some have argued that the *femmes-aux-serpents* "bring lactation back to its disturbing [and] carnivorous character" (Dittmar, Maillet & Questiaux 2011). In folklore, the disconcerted reactions of those who nurse the milk-suckling snake are a recurring theme, as illustrated by the texts of Aeschylus and Tommasuccio mentioned above. Undoubtedly,

[14] Drawing from Dinzelbacher (1976: 438–439), it is often claimed (e.g. Röckelein 1988: 69; Bauckham 2010: 323–324; 2013: 512) that the *Vision of Ezra* had a direct influence on the intricate compositional process of the *Visio Alberici*. As for the widespread motif of snakes as punitive external agents, this remains a subject of debate (Himmelfarb 1983: 38–39, 98–100). Compare Zillhardt 2000: 189; Easting 2002: 120, 204 for the late twelfth-century *Visio monachi de Eynsham*, a popular English vision of the otherworld that similarly employs the snake motif.

readers, storytellers and their audiences felt unease as such narratives were recounted.[15] There is also a growing scholarly consensus that the imagery of women nursing punitive snakes was not confined to medieval literature, architecture and painting alone. This motif also made its way into the oral tradition in the West, further emphasizing the fear of violating the female body (for evidence, see Odenius 1961: 9–11; Carranza Vera 2009; Bourdier 2017: 43; Mitchell 2019: 121; Guesuraga 2019). Some have even drawn parallels between this folklore (classed as *exempla* no. 4281 and 4888 in Tubach 1969: 327, 369) and tales of women being suckled by milk-loving snakes.[16] It might therefore be beneficial to integrate everyday beliefs and customs into the study of medieval iconographic language. This approach presents theoretical challenges, particularly in translating verbal narratives into pictorial representations. While some art historians embrace the dialogue between artistic and folkloric representations, others may be more reluctant. In the most contentious discussions, some argue that either folklore provided the 'raw imaginative material' for iconography, or that the reverse is true (Rooth 1992; Garrido 2010).[17] The motif of the 'punitive breast-suckling

[15] An elderly Italian woman, interviewed in the 2000s, bore "a very unpleasant memory" of a milk-suckling snake story she had heard during her youth (Cedrone 2005: 62). Between 2011 and 2013, urban legends emerged in Namibia and Uganda and subsequently attracted the attention of local authorities. These tales described young, frightened women having a turtle forcibly placed on their breasts. Allegedly, an unidentified foreigner or businessman would entice these women with promises of employment, shopping, a ride and so on. As the legends have it, the turtle would grow larger with each sip of milk (Fluin 2012; Malaba 2013; ChimpReports 2013). I am grateful to Roberto Labanti and Sofia Lincos for directing me to these African sources.

[16] Cedrone (2005: 62–63) posits that the *Visio Alberici*, "through the stories of generations of women, left its mark in a local folk legend" in modern Italy featuring a milk-suckling snake. For similar claims for Spain, see Castillo Martínez 2009: 16–17; Torrez Paz 2017: 152–153.

[17] For instance, Brodman (1992) loosely suggests that the Old French *Livre de Carados* (*c.* 1210), which depicts a milk-drinking and milk-suckling snake, might have drawn inspiration from the *femmes-aux-serpents* (see Baring-Gould & Fisher 1907: 331–333; Foehr-Janssens 2016; Ermacora 2017: 66 for the Caradoc story). In a similar fashion, Wilby (2019: 68, 136–137) posits that the vivid statement of two suspected witches of the Basque village of Zugarramurdi, who claimed to have breastfed toads in the early seventeenth century, "seems less incongruous when we consider the fact that [they] may have walked past carved reliefs of amphibians or reptiles suckling at the breasts of naked women every time [they] went into [their] local church". For more on the phenomenon of the toad familiar in Basque and Navarrese traditions, see Alberola 2017: 57; Rojas 2020; Tausiet 2022; Machielsen 2024: 119–144.

snake' persisted beyond the medieval period in religious art and storytelling: it proved a powerful idea.[18]

5. Conclusion

In Ermacora (2017), I investigated the motif of breasts or udders being suckled by reptiles across oral, written and iconographic sources. The contributions of Larsson and Jørgensen in this volume have further broadened the documentary evidence, focusing on, respectively, the Baltic and the Celtic cultural-linguistic spheres. In this chapter, I have revisited my earlier discussion, gathered additional materials, and focused on the imagery of a snake suckling from a woman's breast. I hope to have shown that it is essential to approach comparisons with caution: while the morphology remains stable, meanings can differ. Despite occasional scholarly claims (see above and note 16), milk-drinking and milk-suckling snakes in folklore have nothing to do with morally driven stories involving "punitive breast-suckling snakes". These have their foundation in the Islamic/Christian moral code (e.g. Longoni 2004), vividly exemplified by the artistic representation of the *femme-aux-serpents*. The milk-loving snake and the breast-suckling snake, the latter conceived as retribution for "wrong acts" such as poor parenting and inadequate motherhood, evolved independently. Any possible,

[18] Iconography: An impressive Ukrainian Last Judgment icon from 1685 depicts snakes attached to the breasts of a woman guilty of infanticide and a witch known for milk-stealing magic (Kivelson & Worobec 2020: 411). There are many analogous representations in Ukrainian and Romanian icons and church paintings that date, respectively, from the fifteenth century to the eighteenth, and from the eighteenth century to the nineteenth. This shared imagery might arise from the dissemination of religious iconography from Ukraine to Romania, or from a unified "Carpathian" cultural zone (Pop-Curşeu & Pop-Curşeu 2022: 262–275; 284–287). In a sixteenth-century Mexican church, a painting depicts an indigenous woman holding two snakes either suckling or biting her breasts, likely representing a *femme-aux-serpents* (Pérez-Flores 2020). Folklore: a nineteenth-century Tuscan folk song in *ottava rima* tells the story of a woman who, upon refusing to breastfeed her deceased sister's baby, pledges her milk to a snake. A demonic snake then appears, latching onto the woman's breast. Upon her death, she is buried with the animal still attached to her body (Baronti 2020: 449–454). This narrative, listed as tale-type 1440 in D'Aronco (1953: 178), enjoyed widespread popularity in Tuscany, with variants found in cheap print sources from the late eighteenth century to the early nineteenth (Giannini 1938: 391–392; Schenda 1962: 222, 233; Baronti 2020: 449). Parallels are to be found in Spain, as seen in seventeenth- and eighteenth-century broadsheets (*relaciones de sucesos*) and twentieth-century ballads (Goldberg 2000: 7, 46; Carranza Vera 2009; Castillo Martínez 2009: 16–17).

occasional association between the two remains speculative. As Halpert (1980: 226) aptly states, "most cultures use legends about supernatural punishments to support the belief systems which govern both social and individual behaviour". The breast-suckling snake confirms this.

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